SHARP SERVICE MANUAL

No. 00ZUXA260USME

Illustration: UX-A260U

FACSIMILE

MODEL UX-A260

MODEL	SELECTION CODE	DESTINATION
UX-A260	U	U.S.A.

Chapters 1, 2, 3, 7 and 8 of this manual are omitted because they are partly common to the UX-P100U. Please refer to previous service manual (00ZUXP100USME) for these chapters.

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Parts marked with "⚠" are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

SHARP CORPORATION

This document has been published to be used for after sales service only.
The contents are subject to change without notice.

CAUTION FOR BATTERY REPLACEMENT

(Danish) ADVARSEL !
Lithiumbatteri-Eksplosionsfare ved fejlagtig håndtering.
Udskiftning må kun ske med batteri af samme fabrikat og type.
Levér det brugte batteri tilbage til leverandoren.

(English) Caution !
Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type
recommended by the equipment manufacturer.
Discard used batteries according to manufacturer's
instructions.

(Finnish) VAROITUS
Paristo voi räjähtää, jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan
tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden
mukaisesti.

(French) ATTENTION
Il y a danger d'explosion s' il y a remplacement incorrect
de la batterie. Remplacer uniquement avec une batterie du
même type ou d'un type recommandé par le constructeur.
Mettre au rébut les batteries usagées conformément aux
instructions du fabricant.

(Swedish) VARNING
Explosionsfare vid felaktigt batteribyte.
Använd samma batterityp eller en ekvivalent
typ som rekommenderas av apparattillverkaren.
Kassera använt batteri enligt fabrikantens
instruktion.

(German) Achtung
Explosionsgefahr bei Verwendung inkorrekter Batterien.
Als Ersatzbatterien dürfen nur Batterien vom gleichen Typ oder
vom Hersteller empfohlene Batterien verwendet werden.
Entsorgung der gebrauchten Batterien nur nach den vom
Hersteller angegebenen Anweisungen.

CHAPTER 1. GENERAL DESCRIPTION

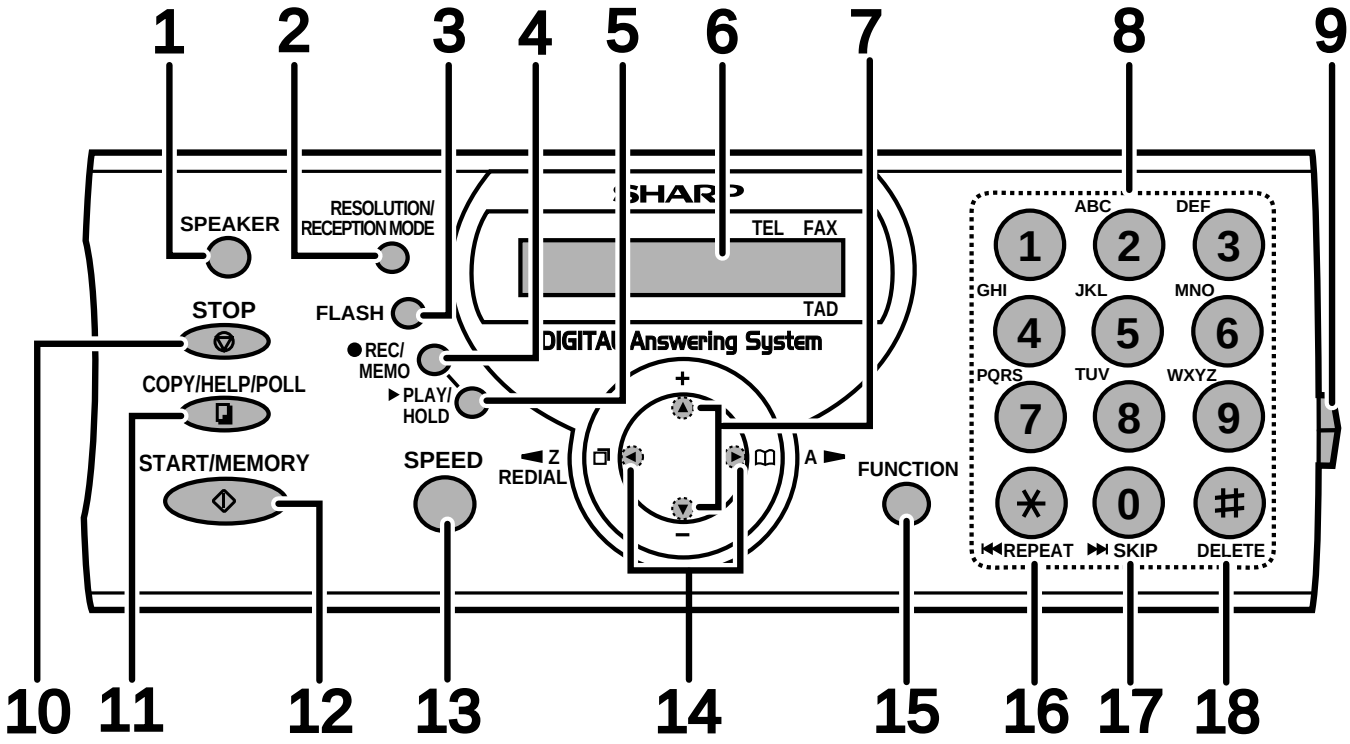
[1] Specifications

Automatic dialing:	40 numbers
Imaging film:	**Initial starter roll:** (included with machine): 32 ft. (10 m) (approx. 30 letter-size pages) **Replacement roll** (not included): **UX-5CR** 164 ft. (50 m) roll (one roll yields approx. 150 letter-size pages)
Memory size* :	448 KB (approx. 24 average pages with no voice messages recorded, or 20 minutes of voice message (including OGMs) with no documents in memory)
Modem speed:	14,400 bps with automatic fallback to lower speed
Transmission time* :	Approx. 6 seconds (only when ECM is on)
Resolution:	**Horizontal:** 203 pixels/inch (8 dots/mm) **Vertical:** Standard: 98 lines/inch (3.85 lines/mm) Fine/Halftone: 196 lines/inch (7.7 lines/mm) Super fine: 391 lines/inch (15.4 lines/mm)
Automatic document feeder:	10 pages max. (letter/A4, 20 lb paper)
Recording system:	Thermal transfer recording
Halftone (grayscale):	64 levels
Compression scheme:	MH, MR, MMR
Display:	16-digit LCD display
Applicable telephone line:	Public switched telephone network
Paper tray capacity:	Letter: Approx. 50 sheets (20-lb. copier paper at room temperature; maximum stack height should not be higher than the line on the tray) Legal: 5 sheets Recommended paper weight is 20-lb. Copy Bond
Compatibility:	ITU-T (CCITT) G3 mode
Input document size:	**Automatic feeding:** Width: 5.8 to 8.5" (148 to 216 mm) Length: 5.5 to 11" (140 to 279 mm) **Manual feeding:** Width: 5.8 to 8.5" (148 to 216 mm) Length: 5.5 to 23.6" (140 to 600 mm)
Effective scanning width:	8.3" (210 mm) max.
Effective printing width:	8.3" (210 mm) max.
Contrast control:	Automatic/Dark selectable
Reception modes:	TEL/FAX/TAD
Copy function:	Single/Multi (99 copies/page)
Telephone function:	Yes (cannot be used if power fails)
Power requirements:	120 V AC, 60 Hz
Operating temperature:	41 - 95°F (5 - 35°C)
Humidity:	25 - 85 % RH
Power consumption:	Stand-by: 3.6 W Maximum: 100 W
Dimensions (without attachments):	Width: 12.9" (327 mm) Depth: 7.6" (193 mm) Height: 6.4" (163 mm)
Weight (without attachments):	Approx. 6.2 lbs. (2.8 kg)

* Based on Sharp Standard No.1 Chart at standard resolution, excluding time for protocol signals (i.e., ITU-T phase C time only).

As a part of our policy of continuous improvement, SHARP reserves the right to make design and specification changes for product improvement without prior notice. The performance specifications figures indicated are nominal values of production units. There may be some deviations from these values in individual units.

[2] Operation panel



1. **SPEAKER key**
   Press this key to listen to the line and fax tones through the speaker when faxing a document.
   Note: **This is not a speakerphone.** You must pick up the handset to talk with the other party.
2. **RESOLUTION / RECEPTION MODE key**
   When a document is in the feeder, press this key to adjust the resolution for faxing or copying. At any other time, press this key to select the reception mode (an arrow in the display will point to the currently selected reception mode).
3. **FLASH key**
   This key is used for Call Waiting and other special services that require subscription from your phone company. Your phone company will provide you with details on how to use the key.
4. **REC/MEMO key**
   Press this key to record an outgoing message, phone conversation, or memo.
5. **PLAY/HOLD key**
   Press this key to play recorded messages. At any other time, press this key to put the other party on hold during a phone conversation.
6. **Display**
   This displays messages and prompts to help you operate the machine.
7. **UP and DOWN arrow keys**
   Enlarge/Reduce setting: When marking a copy of a document, press these keys to select an enlarge/reduce setting.
   Volume setting: When a document is not in the feeder, press these keys to change the handset volume when the handset is lifted, the speaker volume when the **SPEAKER** key has been pressed, or the ringer volume at any other time.
   FUNCTION key setting: Press these keys after pressing the **FUNCTION** key to scroll through the FUNCTION MODE settings.
8. **Number keys**
   Use these keys to dial numbers, and enter numbers and letters when storing auto-dial numbers.
9. **Panel release**
   Press this release to open the operation panel.
10. **STOP key**
    Press this key to cancel operations before they are completed.
11. **COPY/HELP/POLL key**
    When a document is in the feeder, press this key to make a copy of a document. When a document is not in the feeder, press this key to print out the Help List, a quick reference guide to the operation of your fax machine. This key is also used after dialing to poll (request fax transmission from) another machine.
12. **START/MEMORY key**
    Press this key after dialing to begin fax transmission. Press this key before dialing to send a fax through memory. The key can also be pressed in the date and time display to show the percentage of memory currently used.
13. **SPEED key**
    Press this key to dial a fax or voice number using an abbreviated 2-digit Speed Dial number.
14. **Left and right arrow keys**
    Auto-dial numbers: When sending a fax or making a phone call, press these keys to scroll through your auto-dial numbers, the "REVIEW CALLS" list (only available if you have Caller ID), and the last number dialed (redial).
    FUNCTION key settings: Press the right arrow key after scrolling with the up and down arrow keys to select a **FUNCTION** key setting.
15. **FUNCTION key**
    Press this key to followed by the arrow keys select special functions and setting.
16. **REPEAT key**
    Press this key while listening to a message to play it again.
17. **SKIP key**
    Press this key while listening to a message to skip to the next message.
18. **DELETE key**
    Press this key to erase recorded messages.

[3] Transmittable documents

Refer to the service manual of UX-P100U.

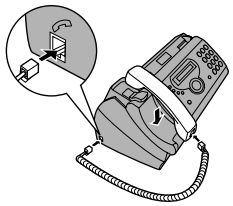
[4] Installation

Refer to the service manual of UX-P100U.

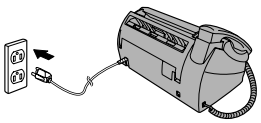
[5] Quick setup guide

Note: To enter your name and fax number and set the date and time so that they appear at the top of each fax you send, see pages 17 - 20 of your operation manual.

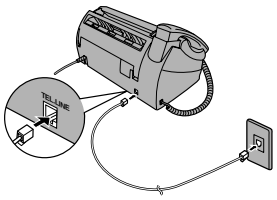
1 Connect the handset and place it on the handset rest.



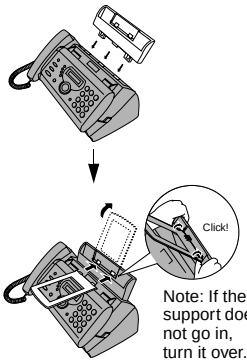
2 Plug the power cord into a 120 V grounded outlet.



3 Connect the telephone line cord to the **TEL. LINE** jack and a wall telephone jack.



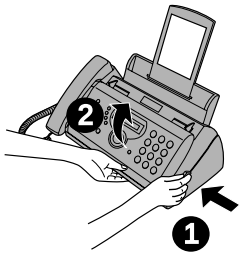
4 Attach the paper tray and document support.



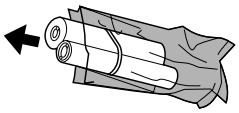
Note: If the support does not go in, turn it over.

5 Load the imaging film.

1. Open the operation panel (press ❶).

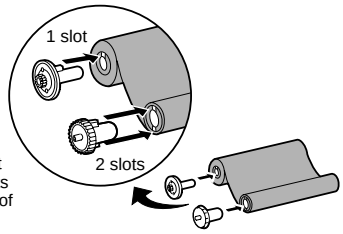


2. Remove the imaging film from its packaging. Cut the band that holds the rolls together.



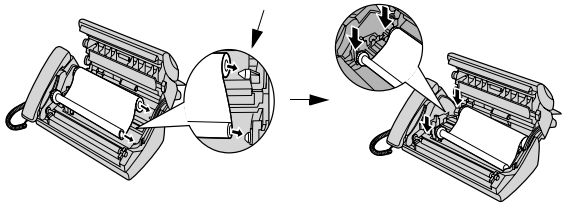
3. Insert the green gears.

IMPORTANT: Do NOT discard the green gears. They are not included with replacement imaging film.

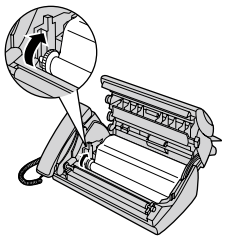


Make sure the gears fit into the slots in the ends of the rolls.

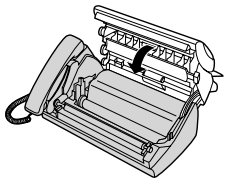
4. Insert the film into the print compartment.



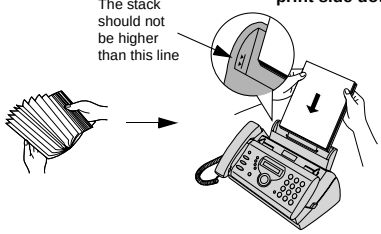
5. Rotate the front spool as shown until the film is taut.



6. Close the operation panel (press down on both sides to make sure it clicks into place).



6 Load paper.



- **GENTLY LOAD PAPER INTO THE PAPER TRAY.**
- **DO NOT FORCE IT DOWN INTO THE FEED SLOT.**

Note: If you loaded legal paper, see page 16 of the operation manual to change the paper size setting to LEGAL.

7 Record an outgoing message (greeting) for TAD mode inviting callers to leave a message.
(Note: ìTADî stands for ìTelephone Answering Deviceî.)

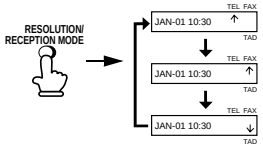
1. Press REC/MEMO, ◐, and ◑.
2. Lift the handset, press START/MEMORY, and speak into the handset.
3. When finished, press STOP.

8 Select the reception mode for incoming faxes and voice calls:

FAX mode: The machine automatically answers all calls and begins fax reception.

TEL mode: Lift the handset when the machine rings. Press START/MEMORY to begin fax reception.

TAD mode: Select this mode when you go out to receive both voice messages and faxes. (Note: To select TAD mode, you must first record an outgoing message.)

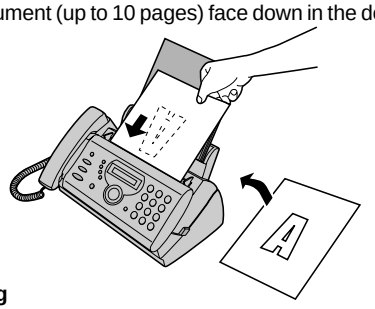


The arrow in the display points to the selected reception mode.

[6] Quick reference guide

SENDING FAXES

Place your document (up to 10 pages) face down in the document feeder.



Normal Dialing

1. Lift the handset or press SPEAKER.
2. Dial the fax number.
3. Wait for the reception tone (if a person answers, ask them to press their Start key).
4. Press START/MEMORY.

Search Dialing

1. Press ◄ or ► until the desired destination appears in the display.
2. Press START/MEMORY.

Speed Dialing

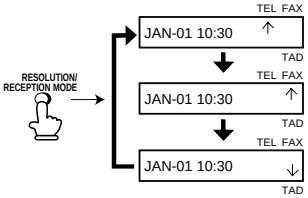
1. Press SPEED and enter the Speed Dial number.
2. Press START/MEMORY .

RECORDING AN OGM

1. Press REC/MEMO , ▼ , and ► .
2. Lift the handset, press START/MEMORY, and speak into the handset.
3. When finished, press STOP .

RECEIVING FAXES

Press the RESOLUTION/RECEPTION MODE until the arrow in the display points to the desired reception mode.



FAX mode: The fax machine automatically answers and receives faxes.

TEL mode: Answer all calls (even faxes) by picking up the handset. To begin fax reception, press START/MEMORY .

TAD mode: Select this mode when you go out to receive both voice messages and faxes.

STORING AUTO DIAL NUMBERS

1. Press FUNCTION once and ► once.
2. Enter a 2-digit Speed Dial number (01 to 40).
3. Enter the fax number and press START/MEMORY .
4. Enter the name by pressing number keys. (To enter two letters in succession that require the same key, press ► after entering the first letter.)

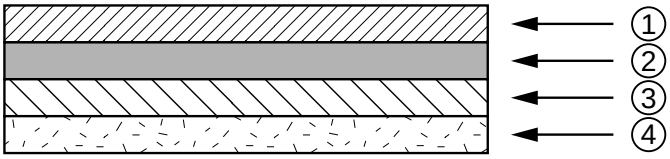
SPACE = 1	G = 4	N = 66	U = 88
A = 2	H = 44	O = 666	V = 888
B = 22	I = 444	P = 7	W = 9
C = 222	J = 5	Q = 77	X = 99
D = 3	K = 55	R = 777	Y = 999
E = 33	L = 555	S = 7777	Z = 9999
F = 333	M = 6	T = 8	

5. Press START/MEMORY and then STOP .

[7] Option imaging film specifications (UX-5CR)

1. Structure

This article is composed of polyester film coated with heat-resistant layer, matt layer and hot melt ink layer, leader film and paper core. Ink film specification is "DNP standard ink film HC".



① Heat Resistant Layer
② Base Film
③ Matt Layer
④ Hot melt Ink Layer

2. Details of compositions

2-1. Base film

Heading	Requirements	Measuring method
Material	Polyethylene-terephthalate	–

2-2. Heat resistant layer

Heading	Requirements	Measuring method
Grade	HR Mixer P-5	–

2-3. Matt layer

Heading	Requirements	Measuring method
Grade	ML Sumi	–

2-4. Hot melt ink layer

Heading	Requirements	Measuring method
Grade	#507W	–

CHAPTER 2. ADJUSTMENTS

[1] Adjustments

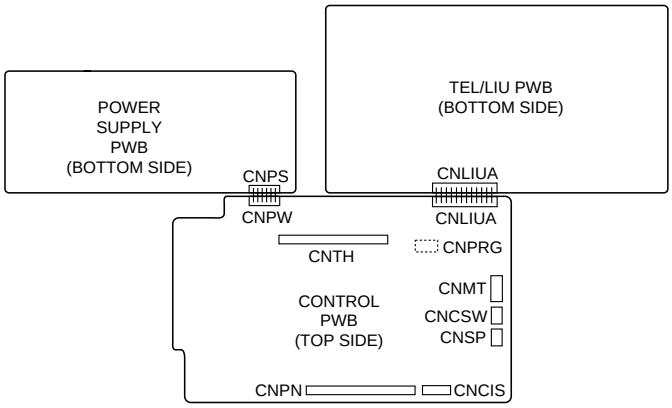
General

Since the following adjustments and settings are provided for this model, make adjustments and/or setup as necessary.

1. Adjustments of output voltage (FACTORY ONLY)

1. Install the power supply unit in the machine.
2. Set the recording paper and document.
3. When the document is loaded, power is supplied to the output lines. Confirm that outputs are within the limits below.

Output voltage settings



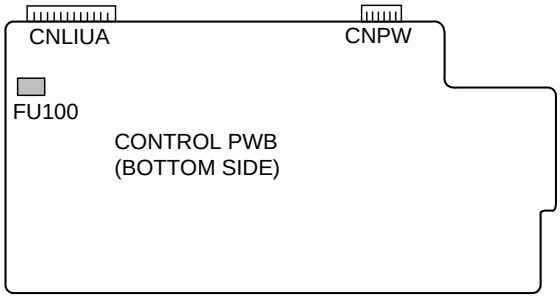
Output	Voltage limits
+5V	4.25V ~ 5.75V
+24V	23.3V ~ 24.7V

Connector No. / Pin No.	CNPW
1	+24V
2	+24V
3	MG
4	MG
5	DG
6	+5V

2. IC protectors replacement

ICPs (IC Protectors) are installed to protect the motor driver circuit. ICPs protect various ICs and electronic circuits from an overcurrent condition.

The location of ICPs are shown below:



(1) FU100 (KAB3202) is installed in order to protect IC's from an overcurrent generated in the motor drive circuit. If FU100 is open, replace it with a new one.

3. Settings

(1) Dial mode selector

DIAL mode (Soft Switch No. SW-B4 DATA No. 3)

(step 1) Select "OPTION SETTING".

KEY : FUNCTION → ▼▼▼▼ → ▶

DISPLAY: [OPTION SETTING ▲▼▶] [NUMBER OF RING ▲▼▶]

(step 2) Select "DIAL MODE".

KEY: Push ▼ until [DIAL MODE ▲▼▶] is → ▶ indicated because the number of ▼ 's changes by the model.

DISPLAY: [DIAL MODE ▲▼▶] [1=TONE, 2=PULSE]

(step 3) Select, using "1" or "2".

KEY: (1)

DISPLAY: [TONE SELECTED]

KEY: (2)

DISPLAY: [PULSE SELECTED]

(step 4) End, using the "STOP" key.

KEY: STOP

4. Volume adjustment

You can adjust the volume of the speaker, handset, and ringer using the UP and DOWN arrow keys.

(1) Speaker

1. Press the **SPEAKER** key.
2. Press the **UP** or **DOWN** key until the display shows the desired volume level.

• Press **SPEAKER** key again to turn off the speaker.

(2) Handset

1. When talking through the handset, press **UP** or **DOWN** key until the display shows the desired volume level.

Display:

[RECEIVER: HIGH] ↕ [RECEIVER: MIDDLE] ↕ [RECEIVER: LOW]

• **Note:** The volume reverts to MIDDLE each time you replace the handset.

(3) Ringer

1. Press the **UP** or **DOWN** key. (Make sure **SPEAKER** key has not been pressed, the handset is not lifted, and a document is not loaded in the feeder.)

Display:

[RINGER: HIGH] ↕ [RINGER: MIDDLE] ↕ [RINGER: LOW] ↕ [RINGER OFF: OK?]

• The ringer will ring once at the selected level, then the date and time will reappear in the display.

2. If you selected RINGER OFF: OK?, press **START/MEMORY** key.

[2] Diagnostics and service soft switch

1. Operating procedure

(1) Entering the diagnostic mode

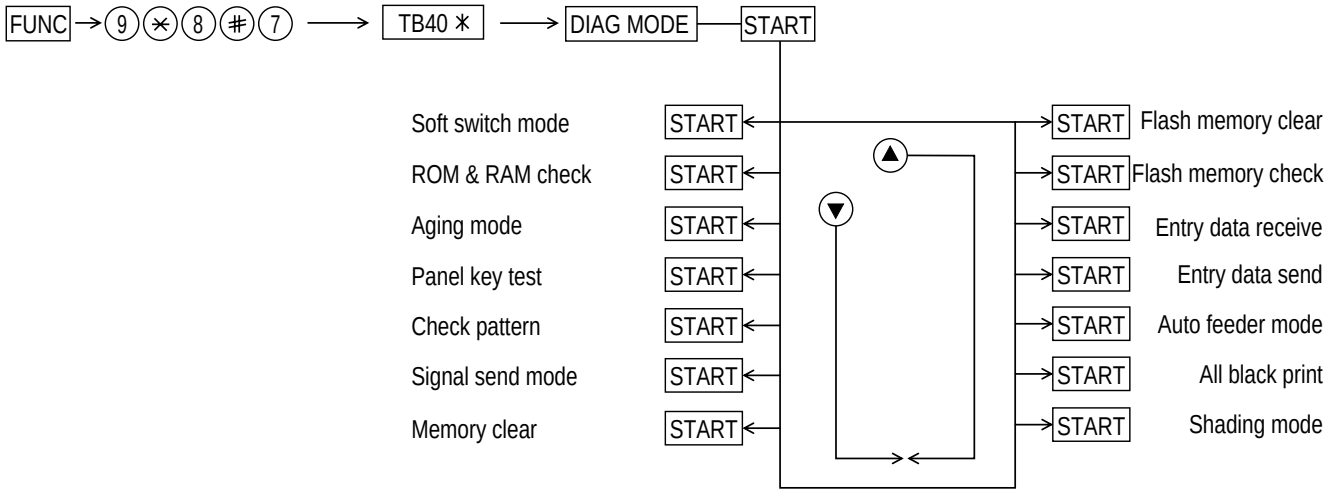
Press FUNC →9→ ✳ →8 →# →7 , and the following display will appear.

ROM Ver. TB40 ✳ After 2 sec: DIAG MODE

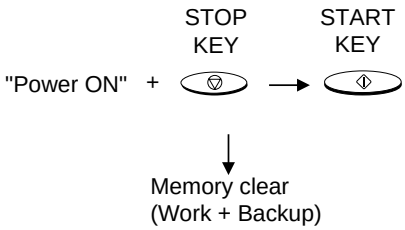
TB40 ✳

Then press the START key. Select the desired item with the ✳ key or the # key or select with the rapid key. Enter the mode with the START key.

(Diag•specifications)



If the diag mode cannot be set, repeat the diag mode operation, performing the following operation.
After the power is turned on and "WAIT A MOMENT" is indicated, press the STOP key.



In relation with the process response (request from Production Engineering) "WAIT A MOMENT" clock indication may appear depending on STOP key timing. If the STOP key is held down, "MEMORY CLEAR?" appears.

2. Diagnostic items

ITEM No.	Contents	Function
1	SOFT SWITCH MODE	Soft switches are displayed and changed. List can be output.
2	ROM & RAM CHECK	ROM is sum-checked, and RAM is matched. Result list is output.
3	AGING MODE	10 sheets of check patterns are output every 5 minutes per sheet.
4	PANEL KEY TEST	Panel keys are tested. Result list is output.
5	CHECK PATTERN	Check pattern is output.
6	SIGNAL SEND MODE	Various signals of FAX communication are output.
7	MEMORY CLEAR	Back-up memory is cleared, and is set at delivery.
8	SHADING MODE	Shading compensation is performed in this mode.
9	ALL BLACK PRINT	To check the print head, whole dots are printed over the interval of 2 m.
10	AUTO FEEDER MODE	Insertion and discharge of document are tested.
11	ENTRY DATA SEND	Registered content is sent.
12	ENTRY DATA RECEIVE	Registered content is received, and its list is output.
13	FLASH MEMORY CHECK	Checks flash memory write/read.
14	FLASH MEMORY CLEAR	Checks flash memory clearing.

3. Diagnostic items description

3. 1. Soft switch mode

Used to change the soft switch settings.

The soft switch which is stored internally is set by using the keys.

The available soft switches are SW-A1 to SW-O6.

The content of soft switches is shown in page 2-5 to 2-19.

The contents are set to factory default settings.

3. 2. ROM & RAM check

ROM executes the sum check, and RAM executes the matching test. The result will be notified with the number of short sounds of the buzzer as well as by printing the ROM & RAM check list.
Number of short sounds of buzzer 0 → No error
1 → ROM error
2 → RAM error (4 Kbyte SRAM or 512 Kbyte DRAM)

3. 3. Aging mode

If any document is present, copying will be executed sheet by sheet. If no document is present, the check pattern will be printed sheet by sheet. This operation will be executed at a rate of one sheet per 5 minutes, and will be ended at a total of 10 sheets.

3. 4. Panel key test

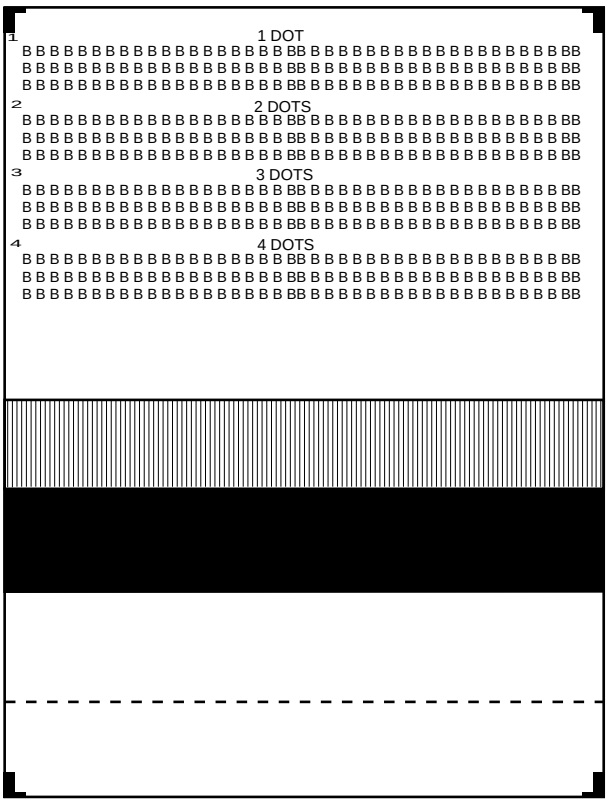
This mode is used to check whether each key operates properly. Press the key on the operation panel, and the key will be displayed on the display. Therefore, press all keys. At this time, finally press the STOP key.

When the STOP key is pressed, the keys which are not judged as "pressed" will be printed on the result list.

- LED part of the contact image sensor (CIS) is kept on during the term from when "START" of the panel test mode to end with the STOP key.

3. 5. Check pattern

This mode is used to check the state of the printing head. It is ended with the following pattern printed on one printing sheet.



3. 6. Signal send mode

This mode is used to send various signals to the circuit during FAX communication. Every push of START key sends a signal in the following sequence. Moreover, the signal sound is also output to the speaker when the line monitor of the soft switch is on.

[1] No signals
[2] 14400BPS (V.33)
[3] 12000BPS (V.33)
[4] 14400BPS (V.17)
[5] 12000BPS (V.17)
[6] 9600BPS (V.17)
[7] 7200BPS (V.17)
[8] 9600BPS (V.29)
[9] 7200BPS (V.29)
[10] 4800BPS (V27ter)
[11] 2400BPS (V27ter)
[12] 300BPS (FLAG)
[13] 2100Hz (CED)
[14] 1100Hz (CNG)

3. 7. Memory clear

This mode is used to clear the backup memory and reset to the default settings.

3. 8. Shading mode

The mode is used for the shading compensation. For reading, set up the special original paper.
The compensation memorizes the reference data of white and black for reading.
Moreover, the memorized data is not erased even if memory clear mode is executed.

3. 9. All black print

This mode is used to check the state of the printing head and to intentionally overheat it. Whole dots are printed over the interval of 2 m. If it is overheated or the printing sheet is jammed, press STOP key for the end.

3. 10. Auto feeder mode

In this mode, a document is inserted and discharged to check the auto feed function.

After this mode is started, set a document, and the document feed will be automatically tested.

3. 11. Entry data send

This mode is used to send the registered data to another machine and make the other machine copy the registered content.

Before sending in this mode, it is necessary to set the other machine at the entry data receive mode.

The following, information will be sent to the remote machine:

1. Telephone list data
2. Sender register data
3. Optional setting content
4. Soft switch content
5. Junk fax number list
6. Recording setting list data

3. 12. Entry data receive

In this mode, the registered data sent from the other machine is received and the received data is registered in the machine. When this mode is used for receiving, the other machine must be in the entry data send mode.

After receiving is completed, the following lists are printed.

1. Telephone list data
2. Sender register data (*)
3. Optional setting list (*)
4. Soft switch content
5. Junk fax number list (*)
6. Recording setting list data (*)

(*): Refer to SETUP LIST

3. 13. Flash memory check

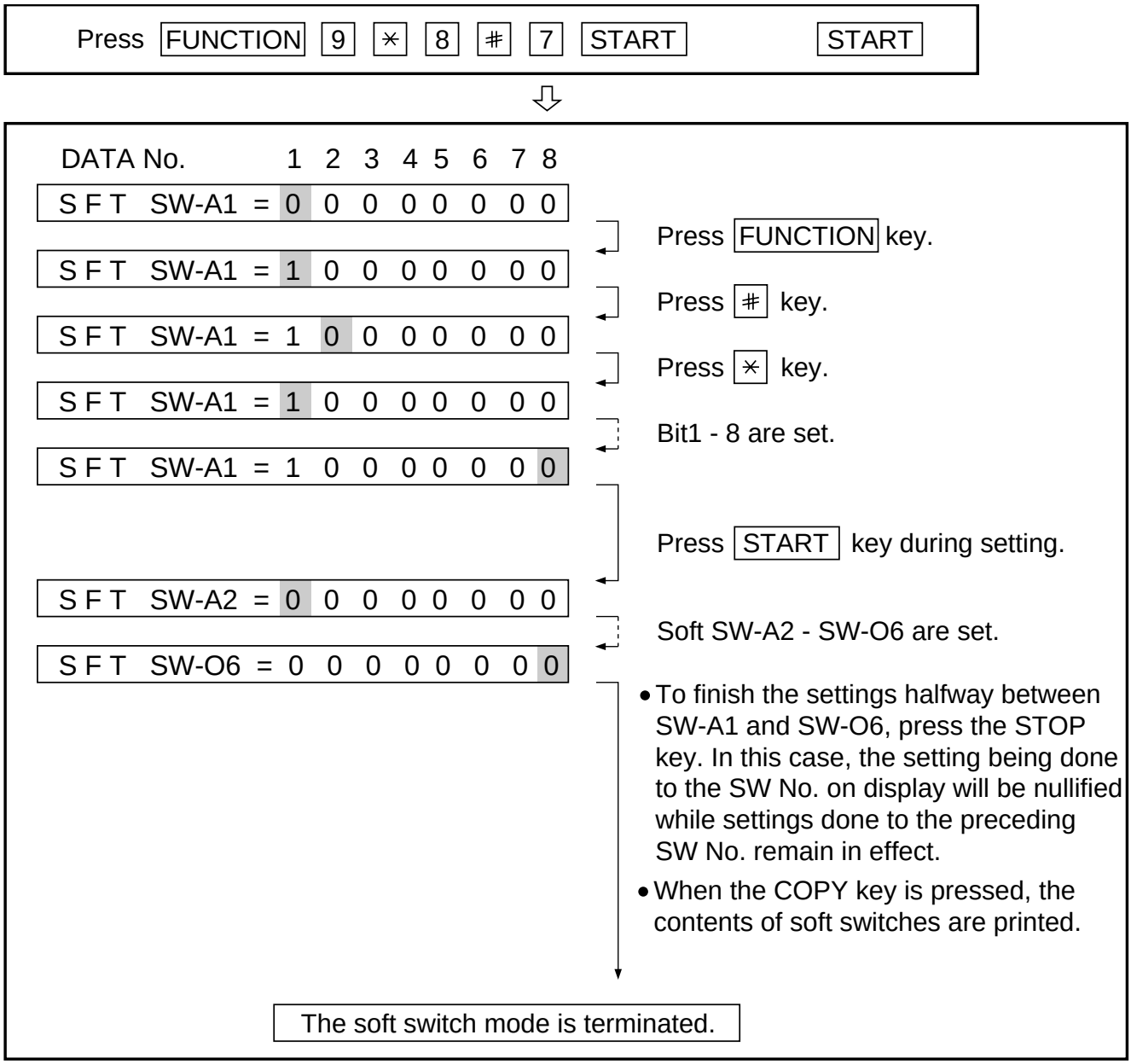
Data is written into and read from the flash memory to check data conformity. When the unit enters this mode, the check is started.

3. 14. Flash memory clear

Data in the flash memory is cleared (memory clear). When the unit enters this mode, the check is started.
*Operation of hardware and signal in the flash memory check mode and flash memory clear mode, and the result of check.
The result is announced by the buzzer beeps. The result of check is printed.
Beeps
0 → No error
1 → Memory error

4. How to make soft switch setting

To enter the soft switch mode, press the following key entries in sequence.


Press FUNCTION 9 ✳ 8 # 7 START
START
DATA No. 1 2 3 4 5 6 7 8
S F T SW-A1 = 0 0 0 0 0 0 0 0
S F T SW-A1 = 1 0 0 0 0 0 0 0
S F T SW-A1 = 1 0 0 0 0 0 0 0
S F T SW-A1 = 1 0 0 0 0 0 0 0
S F T SW-A1 = 1 0 0 0 0 0 0 0
S F T SW-A2 = 0 0 0 0 0 0 0 0
S F T SW-O6 = 0 0 0 0 0 0 0 0
Press FUNCTION key.
Press # key.
Press ✳ key.
Bit1 - 8 are set.
Press START key during setting.
Soft SW-A2 - SW-O6 are set.
• To finish the settings halfway between SW-A1 and SW-O6, press the STOP key. In this case, the setting being done to the SW No. on display will be nullified while settings done to the preceding SW No. remain in effect.
• When the COPY key is pressed, the contents of soft switches are printed.
The soft switch mode is terminated.

5. Soft switch description

• Soft switch

SW NO.	DATA NO.	ITEM	Switch setting and function		Initial setting	Remarks
			1	0		
SW I A1	1	Protect from echo	No	Yes	0	
	2	Forced 4800 BPS reception	Yes	No	0	
	3	Footer print	Yes	No	0	
	4	Length limitation of copy/send/receive	No limit	Copy/send: 60cm Receive: 1m	0	
	5	CSI transmission	No transmitted	Transmitted	0	
	6	DIS receive acknowledgement during G3 transmission	Twice	NSF: Once DIS: Twice	0	
	7	Non-modulated carrier for V29 transmission mode	Yes	No	0	
	8	EOL detect timer	25 s	13 s	0	
SW I A2		Modem speed	V.33 / V.17 / V.29 / V.27 ter			
			14400 12000 14400 12000 9600 7200 9600 7200 4800 2400			
	1		0 0 1 1 1 1 0 0 0 0		1	
	2		1 1 0 0 0 0 0 0 0 0		0	
	3		0 1 0 1 0 1 0 1 1 0		0	
	4		0 0 0 0 1 1 1 1 0 0		0	
	5	Sender's information transmit	No	Yes	0	
	6	Reserved			0	
	7	Communication error treatment in RTN sending mode (reception)	No communication error	Communication error	0	
	8	CNG transmission	No	Yes	0	
SW I A3		CED tone signal interval	1000ms / 750ms / 500ms / 75ms			
	1		No. 1: 1 / 1 / 0 / 0		0	
	2		No. 2: 1 / 0 / 1 / 0		0	
	3	MR coding	No	Yes	0	
	4	ECM mode	No	Yes	0	OPTION
	5	ECM MMR mode	No	Yes	0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW I A4	1	Signal transmission level	Binary input		0	
	2		No. = 16 8 4 2 1		1	
	3		1 2 3 4 5		0	
	4		0 1 0 0 0		0	
	5				0	
	6	Protocol monitor (error print)	Printed at com. error	Not printed	0	
	7	Protocol monitor	Yes	No	0	
	8	Line monitor	Yes	No	0	
SW I A5		Digital line equalization setting (Reception)	7.2km / 3.6km / 1.8km / 0km			
	1		No. 1: 1 / 1 / 0 / 0		0	
	2		No. 2: 1 / 0 / 1 / 0		1	
		Digital line equalization setting	7.2km / 3.6km / 1.8km / 0km			
	3	(Transmission)	No. 3: 1 / 1 / 0 / 0		0	
	4		No. 4: 1 / 0 / 1 / 0		1	
		Digital cable equalizer setting (Reception	7.2km / 0km			
	5	for Caller ID)	No. 5: 1 / 0		0	
	6		No. 6: 1 / 0		0	
	7	Error criterion	10 ~ 20 %	5 ~ 10 %	0	
	8	Anti junk fax check	Yes	No	1	

SW NO.	DATA NO.	ITEM	Switch setting and function		Initial setting	Remarks
			1	0		
SW I A6	1	Reserved			0	
	2	End Buzzer	Yes	No	1	
	3	Disconnect the line when DIS is received in RX mode	No	Yes	1	
	4	Equalizer freeze control (MODEM)	On	Off	0	
	5	Equalizer freeze control 7200 BPS only	No	Yes	0	
	6	CNG transmission in manual TX mode	Yes	No	1	
	7	Reserved			0	
	8	Modem speed automatic fallback when RX level is under -40dBm	Yes	No	0	
SW I B1	1	Recall interval	Binary input		0	
	2		No. = 8 4 2 1		1	
	3		1 2 3 4		0	
	4		0 1 0 1		1	
	5	Recall times	Binary input		0	
	6		No. = 8 4 2 1		0	
	7		5 6 7 8		1	
	8		0 0 1 1		1	
SW I B2	1	Dial pausing (sec/pause)	4 sec	2 sec	0	
	2	Dial tone detection (before auto dial)	No	Yes	1	
	3	Reserved			0	
	4	Busy tone detection (after auto dial)	No	Yes	0	
		Waiting time after dialing	45 seconds	55 seconds / 90 seconds / 140 seconds		
	5		No.5: 0	0 / 1 / 1	0	
	6		No.6: 0	1 / 0 / 1	0	
	7	Reserved			0	
	8	Reserved			0	
SW I B3	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
		Auto dial mode delay timer of before line connect	0 second	1.5 seconds / 3.0 seconds / 4.5 seconds		
	6		No.6: 0	0 / 1 / 1	0	
	7		No.7: 0	1 / 0 / 1	0	
	8	Hold key	Enable	Disable	1	
SW I B4		Auto dial mode delay timer of after line connect	1.7 seconds	3.0 seconds / 3.6 seconds / 4.0 seconds		
	1		No.1: 0	0 / 1 / 1	0	
	2		No.2: 0	1 / 0 / 1	0	
	3	Dial mode	Tone	Pulse	1	OPTION
	4	Pulse → Tone change function by ✳ key	Enable	Disable	1	
	5	Dial pulse make/break ratio (%)	40/60	33/67	1	
	6	Reserved			0	
	7	Reserved			0	
	8	Recalling fixed only one time when dialing was unsuccessful without detecting busy tone signal	Yes	No	1	
SW I B5	1	DTMF signal transmission level (Low)	Binary input		0	
	2		No. = 16 8 4 2 1		1	
	3		1 2 3 4 5		0	
	4		0 1 0 0 1		0	
	5				1	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	

SW NO.	DATA NO.	ITEM	Switch setting and function					Initial setting	Remarks
			1				0		
SW I B6	1	DTMF signal transmission level (High)	Binary input					0	
	2		No. =	16	8	4	2 1	0	
	3			1	2	3	4 5	1	
	4			0	0	1	0 1	0	
	5							1	
	6							0	
	7	Reserved						0	
	8	Reserved						0	
SW I C1		Reading slice (Binary)		Factory setting	Light	Dark	Darker in dark		
	1		No. 1	0	1	0	1	0	
	2		No. 2	0	0	1	1	0	
		Reading slice (Half tone)		Factory setting	Light	Dark	Darker in dark		
	3		No. 3	0	1	0	1	0	
	4		No. 4	0	0	1	1	0	
	5	Line density selection	Fine				Standard	0	
	6	Reserved						0	
	7	MTF correction in half tone mode	No				Yes	0	
	8	Reserved						0	
SW I D1	1	Number of rings for auto receive	Binary input					0	OPTION
	2		No. =	8	4	2	1	1	
	3			1	2	3	4	0	
	4			0	1	0	0	0	
	5	Automatic switching manual to auto receive mode	Reception after 5 rings				No reception	0	
	6	Reserved						0	
		CI detect frequency		As PTT	11.5Hz	13.0Hz	20.0Hz		
	7		No.7	0	0	1	1	0	
	8		No.8	0	1	0	1	0	
SW I D2		Distinctive ringing setting (PATTERN 4 and 5 are for CANADA only)		No. 1	No. 2	No. 3			OPTION
			OFF	0	0	0			
			STANDARD	0	0	1			
			PATTERN1	0	1	0			
			PATTERN2	0	1	1			
	1		PATTERN3	1	0	0		0	
	2		PATTERN4	1	0	1		0	
	3		PATTERN5	1	1	0		0	
	4	Reserved						0	
	5	Caller ID function	Yes				No	0	OPTION
	6	Caller ID detect during CI off	All times				Only first	0	
	7	Reserved						0	
	8	Reserved						0	
SW I D3	1	CI off detection timer (0-1550ms setting by 50ms step)	Binary input					0	
	2		No. =	16	8	4	2 1	1	
	3			1	2	3	4 5	1	
	4			0	1	1	1 0	1	
	5							0	
	6	Reserved						0	
	7	Reserved						0	
	8	Reserved						0	

SW NO.	DATA NO.	ITEM	Switch setting and function		Initial setting	Remarks
			1	0		
SW E1	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW E2	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW E3	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW F1		DTMF detection time	50ms / 80ms / 100ms / 120ms			
	1		No. 1: 0 / 0 / 1 / 1		0	
	2		No. 2: 0 / 1 / 0 / 1		0	
	3	Protection of remote reception (5 ✳✳) detect	Yes	No	1	
	4	Remote reception with GE telephone	Compatible	Not compatible	1	
	5	Remote operation code figure by external	Binary input		0	
	6	TEL (0~9)	No. = 8 4 2 1		1	
	7		5 6 7 8		0	
	8		0 1 0 1		1	
SW F2	1	CNG detection in STAND-BY mode	Yes	No	1	OPTION
		Number of CNG detect (AM mode)	1pulse / 2pulses / 3pulses / 4pulses			
	2		No. 2: 0 / 0 / 1 / 1		0	
	3		No. 3: 0 / 1 / 0 / 1		1	
		Number of CNG detect (STAND-BY mode)	1pulse / 2pulses / 3pulses / 4pulses			
	4		No. 4: 0 / 0 / 1 / 1		0	
	5		No. 5: 0 / 1 / 0 / 1		1	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW G1	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	

SW NO.	DATA NO.	ITEM	Switch setting and function					Initial setting	Remarks
			1				0		
SW I G2	1	Reserved						0	
	2	Reserved						0	
	3	Reserved						0	
	4	Reserved						0	
	5	Reserved						0	
	6	Reserved						0	
	7	Reserved						0	
	8	Reserved						0	
SW I G3	1	Reserved						0	
	2	Reserved						0	
	3	Reserved						0	
	4	Reserved						0	
	5	Reserved						0	
	6	Reserved						0	
	7	Reserved						0	
	8	Reserved						0	
SW I H1		Busy tone detection ON/OFF time (Lower		150ms	200ms	250ms	350ms		
	1	duration)	No. 1	0	0	1	1	0	
	2		No. 2	0	1	0	1	1	
		Busy tone detection ON/OFF time (Upper		650ms	900ms	1500ms	2700ms		
	3	duration)	No. 3	0	0	1	1	0	
	4		No. 4	0	1	0	1	1	
	5	Busy tone detect continuation sound detect during OGM	No			Yes		0	
	6	Busy tone detect continuation sound detect	No			Yes		0	
	7	Busy tone detect intermittent sound detect during OGM	No			Yes		0	
	8	Busy tone detect intermittent sound detect	No			Yes		0	
SW I H2		Busy tone detection pulse number		2pulses	4pulses	6pulses	10pulses		
	1		No. 1	0	0	1	1	0	
	2		No. 2	0	1	0	1	1	
	3	Fax switching when A.M. full	Yes			No		0	OPTION
	4	Busy tone detect continuation sound detect frequency	320Hz - 570Hz			320Hz - 460Hz		0	
	5	Reserved						0	
	6	Reserved						0	
	7	AM OGM announce only mode	Yes			No		0	OPTION
	8	Busy tone continuous sound detect time	5s			10s		1	
SW I I1		ICM recording time		4min	15s	30s	60s		OPTION
	1		No. 1	0	0	1	1	0	
	2		No. 2	0	1	0	1	0	
		A.M. quiet time 1		2s	3s	4s	5s		
	3		No. 3	0	0	1	1	0	
	4		No. 4	0	1	0	1	0	
		A.M. quiet time 2		0s	1s	2s	3s		
	5		No. 5	0	0	1	1	1	
	6		No. 6	0	1	0	1	0	
	7	Key input buzzer on/off switch (Two way recording mode)	On			Off		0	
	8	CPC signal detection	Yes			No		1	OPTION

SW NO.	DATA NO.	ITEM	Switch setting and function									Initial setting	Remarks
			1								0		
SW I I2	1	A.M. quiet detect time	Binary input									0	
	2		No. = 16 8 4 2 1									0	
	3		1 2 3 4 5									1	
	4		0 0 1 1 0									1	
	5											0	
		CPC detection time		4ms	20ms	40ms	70ms	140ms	160ms	200ms	290ms		
	6		No.6	0	0	0	0	1	1	1	1	1	
	7		No.7	0	0	1	1	0	0	1	1	1	
	8		No.8	0	1	0	1	0	1	0	1	1	
SW I I3	1	Reserved										0	
	2	Max OGM record time	15s								60s	0	
	3	Two way record function	Disable								Enable	0	
	4	Toll saver	Disable								Enable	0	OPTION
	5	Reserved										0	
	6	Reserved										0	
	7	Reserved										0	
	8	Transfer dial recall	No								Yes	0	
SW I I4	1	AGC maximum gain (line)	Binary input									0	
	2	(10 ~ 25 dB) (1 dB step)	No. = 8 4 2 1									1	
	3		1 2 3 4									0	
	4		0 1 0 1									1	
	5	AGC maximum gain (Mic)	Binary input									0	
	6	(10 ~ 25 dB) (1 dB step)	No. = 8 4 2 1									1	
	7		5 6 7 8									1	
	8		0 1 1 0									0	
SW I I5	1	AGC energy refrence level access code (line)	Binary input									1	
	2	(-0 ~ -30 dB) (2 dB step)	No. = 8 4 2 1									0	
	3		1 2 3 4									1	
	4		1 0 1 1									1	
	5	AGC energy refrence level access code (Mic)	Binary input									1	
	6	(-0 ~ -30 dB) (2 dB step)	No. = 8 4 2 1									1	
	7		5 6 7 8									0	
	8		1 1 0 1									1	
SW I I6	1	AGC again adaptation threshold (line)	Binary input									1	
	2		No. = 8 4 2 1									1	
	3		1 2 3 4									1	
	4		1 1 1 1									1	
	5	AGC again adaptation threshold (Mic)	Binary input									1	
	6		No. = 8 4 2 1									1	
	7		5 6 7 8									1	
	8		1 1 1 1									1	
SW I I7		AGC slew rate (line)		Slow		Normal		Little fast		Fast			
	1		No. 1	0		0		1		1		0	
	2		No. 2	0		1		0		1		1	
		AGC slew rate (Mic)		Slow		Normal		Little fast		Fast			
	3		No. 3	0		0		1		1		1	
	4		No. 4	0		1		0		1		1	
	5	Reserved										0	
	6	Reserved										0	
	7	Reserved										0	
	8	Reserved										0	

SW NO.	DATA NO.	ITEM	Switch setting and function						Initial setting	Remarks
			1			0				
SW I J1	1	Reserved							0	
	2	Reserved							0	
	3	Sender's phone number setting	Cannot change			Change allowed			0	
	4	Reserved							0	
	5	Reserved							0	
	6	Summer time setting	No			Yes			1	OPTION
		Ringer volume		Off	Low	Middle	High			OPTION
	7		No. 7	0	0	1	1		1	
	8		No. 8	0	1	0	1		0	
SW I J2	1	Reserved							0	
	2	Reserved							0	
	3	Reserved							0	
		Handset receiver volume		Low	Low	Middle	High			OPTION
	4		No. 4	0	0	1	1		1	
	5		No. 5	0	1	0	1		0	
		Speaker volume (5 stages)		Very Low	Low	Middle	High	Very High		OPTION
	6		No. 6	0	0	0	0	1	0	
	7		No. 7	0	0	1	1	0	1	
	8		No. 8	0	1	0	1	0	0	
SW I J3	1	Reserved							0	
		Communication results printout (Transaction report)		E/T/M	Send only	Always	No print	Err only		OPTION
	2		No. 2	0	0	0	0	1	1	
	3		No. 3	0	0	1	1	0	0	
	4		No. 4	0	1	0	1	0	0	
	5	OGM/ICM output level to speaker	Binary input						0	
	6	(0 dB ~ -15 dB) (1 dB step)	No. = 8 4 2 1						0	
	7		5 6 7 8						1	
	8		0 0 1 1						1	
SW I K1	1	Reserved							0	
	2	Reserved							0	
	3	OGM/ICM output level	Binary input						0	
	4	(0 dB ~ -32 dB) (1 dB step)	No. = 32 16 8 4 2 1						0	
	5		3 4 5 6 7 8						1	
	6		0 0 1 0 0 1						0	
	7								0	
	8								1	
SW I L1	1	Reserved							0	
	2	Reserved							0	
	3	Reserved							0	
	4	Reserved							0	
	5	Cut off mode (COPY mode)	Yes			No			1	OPTION
	6	A4 paper enable	Enable			Disable			0	
	7	LEGAL & LETTER paper enable	Enable			Disable			1	
	8	Reserved							0	

SW NO.	DATA NO.	ITEM	Switch setting and function						Initial setting	Remarks
			1			0				
SW I L2		Paper set size		LETTER		LEGAL		A4		OPTION
	1		No. 1	0		0		1	0	
	2		No. 2	0		1		0	0	
	3	Automatic reduce of receive	Auto			100 %			1	OPTION
		Print contrast		Normal	Lighter	Light	Dark	Darker		OPTION
	4		No. 4	0	0	0	0	1	1	
	5		No. 5	0	0	1	1	0	0	
	6		No. 6	0	1	0	1	0	0	
	7	Reception reduction ratio in case of memory ful	100 %			93 %			0	
	8	Reserved							0	
SW I M1	1	Reserved							0	
	2	Reserved							0	
	3	Reserved							0	
	4	Reserved							0	
	5	Reserved							0	
	6	Reserved							0	
	7	Reserved							0	
	8	Reserved							0	
SW I M2	1	Reserved							0	
	2	Reserved							0	
	3	Reserved							0	
	4	Reserved							0	
	5	Reserved							0	
	6	Reserved							0	
	7	Reserved							0	
	8	Reserved							0	
SW I N1	1	Reserved							0	
	2	Reserved							0	
	3	Reserved							0	
	4	Reserved							0	
	5	Reserved							0	
	6	Reserved							0	
	7	Reserved							0	
	8	Reserved							0	
SW I N2	1	Reserved							0	
	2	Reserved							0	
	3	Reserved							0	
	4	Reserved							0	
	5	Reserved							0	
	6	Reserved							0	
	7	Reserved							0	
	8	Reserved							0	
SW I N3	1	Reserved							0	
	2	Reserved							0	
	3	Reserved							0	
	4	Reserved							0	
	5	Reserved							0	
	6	Reserved							0	
	7	Reserved							0	
	8	Reserved							0	

SW NO.	DATA NO.	ITEM	Switch setting and function		Initial setting	Remarks
			1	0		
SW I O1	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW I O2	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW I O3	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW I O4	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW I O5	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	
SW I O6	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	

• Soft switch function description

SW-A1 No. 1 Protect from echo

Used to protect from echo in reception.

SW-A1 No. 2 Forced 4800BPS reception

When line conditions warrant that receptions take place at 4800 BPS repeatedly.

It may improve the success of receptions by setting at 4800BPS.

This improves the receiving document quality and reduces handshake time due to fallback during training.

SW-A1 No. 3 Footer print

When set to "1", the date of reception, the sender machine No., and the page No. are automatically recorded at the end of reception.

SW-A1 No. 4 Length limitation of copy/send/receive

Used to set the maximum page length.

To avoid possible paper jam, the page length is normally limited to 0.6 meter for copy or transmit, and 1 meters for receive.

It is possible to set it to "No limit" to transmit a long document, such as a computer print form, etc. (In this case, the receiver must also be set to no limit.)

SW-A1 No. 5 CSI transmission

(CSI TRANSMISSION) is a switch to set whether the machine sends or does not send the signal (CSI signal) informing its own telephone No. to the remote fax machine when information is received. When "nonsending" is set, the telephone No. is not output on the remote transmitting machine if the remote transmitting machine has the function to display or print the telephone No. of receiving machine, using this CSI signal.

SW-A1 No. 6 DIS receive acknowledgment during G3 transmission

Used to make a choice of whether reception of DIS (NSF) is acknowledged after receiving two DISs (NSFs) or receiving one DIS (two NSFs). It may be useful for overseas communication to avoid an echo suppression problem, if set to 1.

SW-A1 No. 7 Non-modulated carrier for V29 transmission mode

Though transmission of a non-modulated carrier is not required for transmission by the V29 modem according to the CCITT recommendation, it may be permitted to a send non-modulated carrier before the image signal to avoid an echo suppression problem. It may be useful for overseas communication to avoid an echo suppression problem, if set to 1.

SW-A1 No. 8 EOL (End Of Line) detect timer

Used to make a choice of whether to use the 25-second or 13-second timer for detection of EOL.
This is effective to override communication failures with some facsimile models that have longer EOL detection.

SW-A2 No. 1 ~ No. 4 Modem speed

Used to set the initial modem speed. The default is 14400BPS.
It may be necessary to program it to a slower speed when frequent line fallback is encountered, in order to save the time required for fallback procedure.

SW-A2 No. 5 Sender's information transmit

(SENDER'S INFORMATION TRANSMISSION) is a switch to set the function to print the content of HEADER PRINT described in the passcode list at the front end of receiver's original when original is sent to the remote machine.

If this switch is set to "NO", the HEADER PRINT is not output at the receiving machine.

SW-A2 No. 6 Reserved

Set to "0".

SW-A2 No. 7 Communication error treatment in RTN sending mode (Reception)

Used to determine communication error treatment when RTN is sent by occurrence of a received image error in G3 reception. When it is set to "1", communication error is judged as no error.

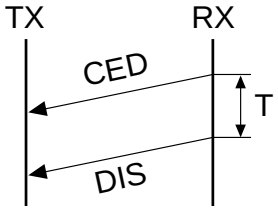
SW-A2 No. 8 CNG transmission

When set to "0" , this model allows CNG transmission by pressing the Start key in the key pad dialing mode. When set to "1", CNG transmission in the key pad dialing mode cannot be performed. In either case. CNG transmission can be performed in the auto dial mode.

SW-A3 No. 1, No. 2 CED tone signal interval

For international communication, the 2100Hz CED tone may act as an echo suppression switch, causing a communication problem.

Though SW-A3 No. 1 and No. 2 are normally set to 0, this setting is used to change the time between the CED tone signal to eliminate the communication caused by echo.



SW-A3 No. 3 MR Coding

MR Coding is enable.

SW-A3 No. 4 ECM mode

Used to determine ECM mode function. Refer to following table.

SW-A3 No.4 ECM MODE		0	0	1	1
SW-A3 No.5 ECM MMR MODE		0	1	0	1
Compression method	ECM MMR mode	Yes	No	No	No
	ECM MH mode	Yes	Yes	No	No
	MR Mode	Yes	Yes	Yes	Yes

(Depending on remote machine)

SW-A3 No. 5 ECM MMR mode

See SW-A3 No. 4.

SW-A3 No. 6 ~ No. 8 Reserved

Set to "0".

SW-A4 No. 1 ~ No. 5 Signal transmission level

Used to control the signal transmission level in the range of-0dB to-31dB.

SW-A4 No. 6 Protocol monitor (Error print)

If set to "1", protocol is printed at communication error.

SW-A4 No. 7 Protocol monitor

Normally set to "0". If set to "1", communication can be checked, in case of trouble, without using a G3 tester or other tools.
When communication FSK data transmission or reception is made, the data is taken into the buffer. When communication is finished, the data is analyzed and printed out. When data is received with the line monitor (SW-A4 No. 8) set to "1" the reception level is also printed out.

SW-A4 No. 8 Line monitor

Normally set to "0". If set to "1", the transmission speed and the reception level are displayed on the LCD. Used for line tests.

SW-A5 No. 1, No. 2 Digital line equalization setting (Reception)

Line equalization when reception is to be set according to the line characteristics.

Setting should be made according to distance between the telephone and the telephone company central switching station.

SW-A5 No. 3, No. 4 Digital line equalization setting (Transmission)

Line equalization when transmitter is to be set according to the line characteristics.
Setting should be made according to distance between the telephone and the telephone company central switching station.

SW-A5 No. 5, No. 6 Digital cable equalizer setting (Reception for Caller ID)

Line equalization when reception for CALLER ID is to be set according to the line characteristics.
Setting should be made according to distance between the telephone and the telephone company central switching station.

SW-A5 No. 7 Error criterion

Used to select error criterion for sending back RTN when receiving image data.

SW-A5 No. 8 Anti junk fax check

When using the Anti junk fax function, set to "1".

SW-A6 No. 1 Reserved

Set to "0".

SW-A6 No. 2 End buzzer

Setting this bit to 0 will disable the end buzzer (including the error buzzer/ on-hook buzzer).

SW-A6 No. 3 Disconnect the line when DIS is received in RX mode

Bit1= 0: When DIS signal is received during RX mode, the line is disconnected immediately.

Bit1= 1: When DIS signal is received during RX mode, the line is disconnected on the next tone.

SW-A6 No. 4 Equalizer freeze control (MODEM)

This switch is used to perform reception operation by fixing the equalizer control of modem for the line which is always in an unfavorable state and picture cannot be received.

* Usually, the control is executed according to the state of line where the equalizer setting is changed always.

SW-A6 No. 5 Equalizer freeze control 7200BPS only

Setting which specifies SW-A3 No. 6 control only in the condition of 7200BPS modem speed.

SW-A6 No. 6 CNG transmission in manual TX mode

When set to "1", fax transmit the CNG signal in case of manual transmission mode (User press the START key after waiting for the fax answering signal from handset or speaker).

SW-A6 No. 7 Reserved

Set to "0".

SW-A6 No. 8 Modem speed automatic fallback when RX level is under -40dBm

When set to "1", if fax signal level is under -40dBm during reception, machine selects the slower modem speed automatically.
It is effective when noises occur on the received document due to the long distance communications.

SW-B1 No. 1 ~ No. 4 Recall interval

Choice is made for a redial interval for speed and rapid dial calls.
Use a binary number to program this. If set to 0 accidentally, 1 will be assumed.

SW-B1 No. 5 ~ No. 8 Recall times

Choice is made as to how many redials there should be.

SW-B2 No. 1 Dialing pause (sec/pause)

Pauses can be inserted between telephone numbers of direct dial connection. Selection of 4 sec or 2 sec pause is available.

SW-B2 No. 2 Dial tone detection (before auto dial)

Used to set YES/NO of dial tone detection in auto dialing.

SW-B2 No. 3 Reserved

Set to "0".

SW-B2 No. 4 Busy tone detection (after auto dial)

Used to set busy tone detection in auto dialing.

SW-B2 No. 5, No. 6 Waiting time after dialing

This is time waiting for the opponent's signals after dialing.

SW-B2 No. 7, No. 8 Reserved

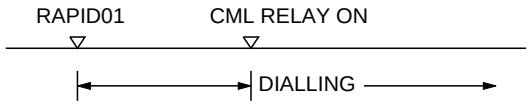
Set to "0".

SW-B3 No. 1 ~ No. 5 Reserved

Set to "0".

SW-B3 No. 6, No. 7 Auto dial mode Delay timer of before line connect

Delay time between the dial key input and line connection under the auto dial mode.



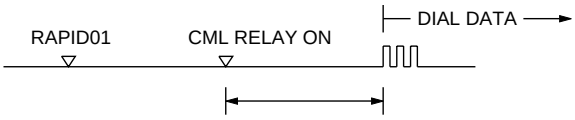
No.6	No.7	
0	0	0sec
0	1	1.5sec
1	0	3.0sec
1	1	4.5sec

SW-B3 No. 8 Hold key

Used to set YES/NO of holding function by the Hold key.

SW-B4 No. 1, No. 2 Auto dial mode Delay timer of after line connect

Delay time between the line connection and dial data output under the auto dial mode.



No.1	No.2	
0	0	1.7sec
0	1	3.0sec
1	0	3.6sec
1	1	4.0sec

SW-B4 No. 3 Dial mode

When using the pulse dial, set to 1. When using the tone dial, set to 0.

SW-B4 No. 4 Pulse → Tone change function by ✳ key

When setting to 1, the mode is changed by pressing the ✳ key from the pulse dial mode to the tone dial mode.

SW-B4 No. 5 Dial pulse make/break ratio (%)

When using the 33% make ratio pulse dial, set to "0".
When using the 40% make ratio pulse dial, set to "1".

SW-B4 No. 6, No. 7 Reserved

Set to "0".

SW-B4 No. 8 Recalling fixed only one time when dialing was unsuccessful without detecting busy tone signal

When dialing results in failure since the busy tone cannot be detected, recalling is fixed to one time.

Supplementary explanation
If time-out termination is made when dialing, only single recall is possible even if the setting time of recalls (SW-B1 No. 5 - No. 8) has been set to some times. This soft switch is added in order to meet FCC regulations.

SW-B5 No. 1 ~ No. 5 DTMF signal transmission level (Low)

The transmission level of DTMF signal is adjusted. (lower frequency)

00000: 0dBm

↓

11111: -15.5dBm (-0.5dBm x 31)

SW-B5 No. 6 ~ No. 8 Reserved

Set to "0".

SW-B6 No. 1 ~ No. 5 DTMF signal transmission level (High)

The transmission level of DTMF signal is adjusted. (higher frequency)

00000: 0dBm

↓

11111: -15.5 dBm (-0.5dBm x 31)

SW-B6 No. 6 ~ No. 8 Reserved

Set to "0".

SW-C1 No. 1, No. 2 Reading slice (Binary)

Used to determine the set value of reading density in standard/fine mode. The standard setting is "00" (Factory setting is "00")

SW-C1 No. 3, No. 4 Reading slice (Half tone)

Used to determine the set value of reading density in half tone mode. The standard setting is "00" (Factory setting is "00")

SW-C1 No. 5 Line density selection

Used to set the transmission mode which is automatically selected when the Resolution key is not pressed. In the copy mode, however, the fine mode is automatically selected unless the Resolution key is manually set to another mode.

SW-C1 No. 6 Reserved

Set to "0".

SW-C1 No. 7 MTF correction in half tone mode

This allows selection of MTF correction (dimness correction) in the half tone mode.
When "NO" (=1) is selected, the whole image becomes soft and mild. Clearness of characters will be reduced. Normally set to "YES" (=0).

SW-C1 No. 8 Reserved

Set to "0".

SW-D1 No. 1 ~ No. 4 Number of rings for auto receive

When the machine is set in the auto receive mode, the number of rings before answering can be selected. It may be set from one to four rings using a binary number. Since the facsimile telephone could be used as an ordinary telephone if the handset is taken off the hook, it should be programmed to the user's choice. If the soft switch was set to 1, direct connection is made to the facsimile. If a facsimile calling beep was heard when the handset is taken off the hook, press the START key and put the handset on the hook to have the facsimile start receiving. If it was set to 0 accidentally, receive ring is set to 1.

NOTE: If the machine is set to answer after a large number of rings, it may not be able to receive faxes successfully. If you have difficulty receiving faxes, reduce the number of rings to a maximum of 6.

SW-D1 No. 5 Automatic switching manual to auto receive mode

This soft switch is used to select whether the machine should switch to the auto receive mode after 5 rings in the manual receive mode or remain in the same way as SW-D1 No. 1, No. 2, No. 3 and No. 4 "0"1"0"1"(5 rings).

SW-D1 No. 6 Reserved

Set to "0".

SW-D1 No. 7, No. 8 CI detect frequency

Detection frequency of ring signal for auto reception is set.
When set to No. 6=0, No. 7=0, frequency is set to PTT recommendation.
When set to No. 6=0, No. 7=1, frequency is set to 11.5Hz or more.
When set to No. 6=1, No. 7=0, frequency is set to 13.0Hz or more.
When set to No. 6=1, No. 7=1, frequency is set to 20.0Hz or more.

SW-D2 No. 1 ~ No. 3 Distinctive ringing setting (PATTERN 4 and 5 are for CANADA only)

This function allows reception of services offered by USA and Canada telephone companies in which the customer contracts with the telephone company to have up to 4 telephone numbers (USA) or 6 telephone numbers (Canada) established for one line.
Each telephone number is signaled by a different ringing pattern, and the customer can allocate each number to a specific use.

<Example of use>

	Phone Number	Intended Purpose	Ring Pattern
Ring Pattern	555-1234	Voice Calls	Standard
	555-1235	Facsimile Calls	Pattern 1
	555-1236	Answering Machine	Pattern 2
	555-1237	PC Modem	Pattern 3

<Distinctive Ringing Timing Specifications>

1) USA

DISTINCTIVE RING → 1:RING PATTERN 1 → 2:RING PATTERN 2 ↓ 3:RING PATTERN 3 ← 4:STANDARD RING ← 5:OFF SETTING ↑

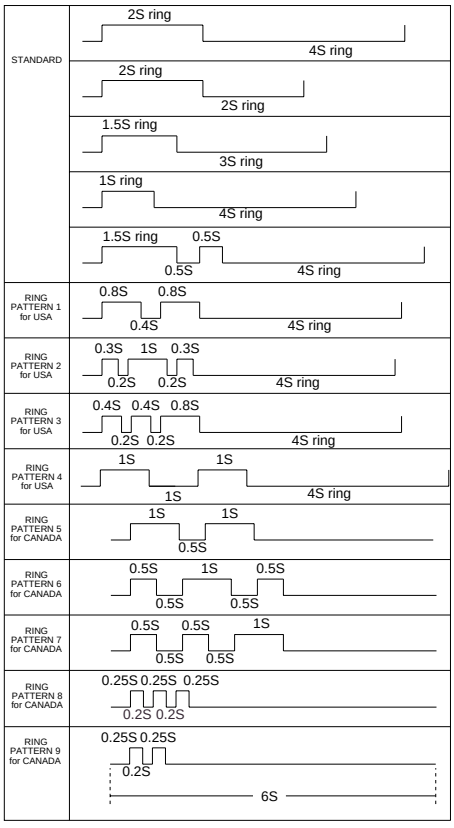
2) Canada

DISTINCTIVE RING → 1:RING PATTERN 1 → 2:RING PATTERN 2 ↓ 3:RING PATTERN 3 ↓ 4:RING PATTERN 4 ← 5:RING PATTERN 5 ← 6:STANDARD RING ← 7:OFF SETTING ↑

- Ring Pattern
  STANDARD has 5 ring patterns, and DISTINCTIVE has 9 patterns.
  Ring patterns ①~④ for USA, and ⑤~⑨ for Canada.
  However, to make the setting procedure as easy as possible for the user to understand these patterns are grouped as follows:

<Optional Setting>

1) RING PATTERN 1	RING PATTERN ①	for USA
	RING PATTERN ④	for USA
	RING PATTERN ⑤	for Canada
2) RING PATTERN 2	RING PATTERN ②	for USA
	RING PATTERN ⑥	for Canada
3) RING PATTERN 3	RING PATTERN ③	for USA
	RING PATTERN ⑦	for Canada
4) RING PATTERN 4	RING PATTERN ⑧	for Canada
5) RING PATTERN 5	RING PATTERN ⑨	for Canada
6) STANDARD RING		
7) OFF SETTING		



SW-D2 No. 4 Reserved

Set to "0".

SW-D2 No. 5 Caller ID function

Used for Caller ID function.

SW-D2 No. 6 Caller ID detect during CI off

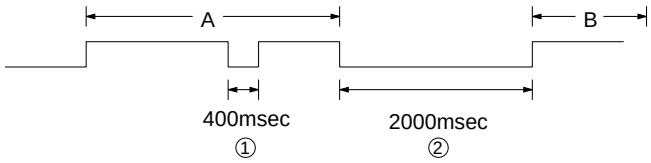
Detection of caller ID signal is performed as follows:
0:First CI OFF only
1:All of CI OFF

SW-D2 No. 7, No. 8 Reserved

Set to "0".

SW-D3 No. 1 ~ No. 5 CI off detection timer (0-1550ms setting by 50ms step)

Set the minimum time period of CI signal interruption.
(Example)



01110 (50ms ~ 14):
700ms (CI interruption>700ms:Judged as a CI OFF section)
The section 1 is not judged as a CI OFF section, the CI signal A is counted as one signal.
The section 2 is judged as a CI OFF section, the CI signal B is considered as the second signal.

00111 (50ms ~ 7):
350ms (CI interruption>350ms:Judged as a CI OFF section)
The section 1 is judged as a CI OFF section, and the CI signal A is counted as two signals.
The section 2 is judged as a CI OFF section, and the CI signal B is considered as the third signal.

SW-D3 No. 6 ~ No. 8 Reserved

Set to "0".

SW-E1 No. 1 ~ No. 8 Reserved

Set to "0".

SW-E2 No. 1 ~ No. 8 Reserved

Set to "0".

SW-E3 No. 1 ~ No. 8 Reserved

Set to "0".

SW-F1 No. 1, No. 2 DTMF detect time

Used to set detect time of DTMF (Dual Tone Multi Frequency) used in remote reception (5 ✳✳).

The longer the detect time is, the less the error detection is caused by noises.

SW-F1 No. 3 Protection of remote reception (5 ✳✳) detect

Used to set the function of remote reception (5 ✳✳). When set to "1", the remote reception function is disabled.

SW-F1 No. 4 Remote reception with GE telephone

(Corresponding to TEL made by GE) P. B. X.

"1": Compatible with TEL mode by GE

"0": Not compatible

- When sending (5✳✳) for remote reception with a GE manufactured telephone remote reception may not take place because of special specifications in their DTMF.
  To overcome this, a soft SW is provided to change the modem setting to allow for remote reception.
- If this soft SW is set to "1", other telephone sets may be adversely affected.

SW-F1 No. 5 ~ No. 8 Remote operation code figure by external TEL (0 ~ 9)

Remote operation codes can be changed from 0 through 9. If set to greater than 9, it defaults to 9. The "5 ✳✳" is not changed.
Ex-7 ✳✳ (Default: 5 ✳✳)

SW-F2 No. 1 CNG detection in STAND-BY mode

When setting to "1", the CNG signal detection function during stand-by stops.

SW-F2 No. 2, No. 3 Number of CNG detect (AM mode)

Used for detection of CNG in 1 to 4 pulses.

SW-F2 No. 4, No. 5 Number of CNG detect (STAND-BY mode)

Used for detection of CNG in 1 to 4 pulses.

SW-F2 No. 6 ~ No. 8 Reserved

Set to "0".

SW-G1 No. 1 ~ No. 8 Reserved

Set to "0".

SW-G2 No. 1 ~ No. 8 Reserved

Set to "0".

SW-G3 No. 1 ~ No. 8 Reserved

Set to "0".

SW-H1 No. 1, No. 2 Busy tone detection ON/OFF time (Lower duration)

The initial value of detection is set according to electric condition.

The set value is changed according to the local switch board. (Erroneous detection of sound is reduced.)

Normally the upper limit is set to 900msec, and the lower limit to 200msec.

If erroneous detection is caused by sound, etc., adjust the detection range.

The lower limit can be set in the range of 350msec to 150msec.

SW-H1 No. 3, No. 4 Busy tone detection ON/OFF time (Upper duration)

Similarly to SW-H1 No. 1, the set value can be varied.

The upper limit can be set in the range of 650msec to 2700msec.

SW-H1 No. 1	SW-H1 No. 2	SW-H1 No. 3	SW-H1 No. 4	Detection range
0	0	0	0	150msec ~ 650msec
0	0	0	1	150msec ~ 900msec
0	0	1	0	150msec ~ 1500msec
0	0	1	1	150msec ~ 2700msec
0	1	0	0	200msec ~ 650msec
0	1	0	1	200msec ~ 900msec
0	1	1	0	200msec ~ 1500msec
0	1	1	1	200msec ~ 2700msec
1	0	0	0	250msec ~ 650msec
1	0	0	1	250msec ~ 900msec
1	0	1	0	250msec ~ 1500msec
1	0	1	1	250msec ~ 2700msec
1	1	0	0	350msec ~ 650msec
1	1	0	1	350msec ~ 900msec
1	1	1	0	350msec ~ 1500msec
1	1	1	1	350msec ~ 2700msec

SW-H1 No. 5 Busy tone detect continuation sound detect during OGM

Used to detect the continuous tone of specific frequency during OGM output.

SW-H1 No. 6 Busy tone detect continuation sound detect

Used to select detection of the continuous sound of certain frequency.

SW-H1 No. 7 Busy tone detect intermittent sound detect during OGM

Used to detect the intermittent tone of specific frequency during OGM output.

SW-H1 No. 8 Busy tone detect intermittent sound detect

Used to select detection of the intermittent sound of certain frequency.

SW-H2 No. 1, No. 2 Busy tone detection pulse number

Used to set detection of Busy tone intermittent sounds.

SW-H2 No. 3 Fax switching when A.M. full

If the answering machine's memory is full and there is no response, the machine automatically switches to Fax reception.

SW-H2 No. 4 Busy tone detect continuation sound detect frequency

Set detecting frequency of busy tone continuation sound for 320 ~ 570 Hz of 320 ~ 460 Hz.

SW-H2 No. 5, No. 6 Reserved

Set to "0".

SW-H2 No. 7 AM OGM announce only mode

If this switch is set to 1, the machine will not record ICM.
(disconnect the line after OGM output)

SW-H2 No. 8 Busy tone continuous sound detect time

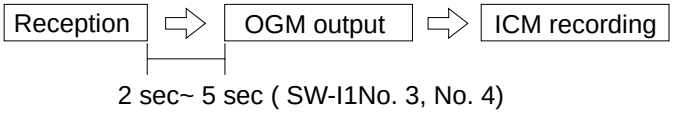
Set detecting time busy tone continuous sound for 5 or 10 seconds.

SW-I1 No. 1, No. 2 ICM recording time

Used to select the incoming message recording time to 15sec/30sec/60sec/4min.

SW-I1 No. 3, No. 4 A.M. quiet time 1

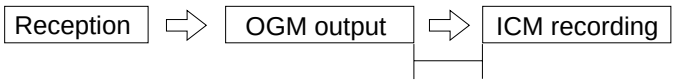
Used to select four kinds of no sound time (2 sec ~ 5 sec) after reception in the T.A.D mode until OGM is output.



2 sec~ 5 sec (SW-I1No. 3, No. 4)

SW-I1 No. 5, No. 6 A.M. quiet time 2

Used to select four kinds of no sound time (0 sec ~ 3 sec) after OGM output the T.A.D mode until ICM recording is started.



0 sec~3 sec (SW-I1 No. 5, No. 6)

SW-I1 No. 7 Key input buzzer on/off switch (Two way recording mode)

Used to turn ON/OFF key input buzzer in the TWO-WAY recording mode.

SW-I1 No. 8 CPC signal detection

Used to turn ON/OFF the CPC (Calling Party Control) signal detection.

SW-I2 No. 1 ~ No. 5 A.M. quiet detect time

Used to set no sound time (0 sec ~ 32 sec) during the T.A.D. mode operation.

SW-I2 No. 6 ~ No. 8 CPC detection time

Used to set the CPC (Calling Party Control) signal detect time.

SW-I3 No. 1 Reserved

Set to "0".

SW-I3 No. 2 Max OGM record time

Used select the outgoing message recording time to 60sec or 15sec.

SW-I3 No. 3 Two way record function

If this switch is set to "1", the machine disables two way recording.

SW-I3 No. 4 Toll saver

Used to turn on the toll saver function. If it is off, the reception frequency in the AM mode is the same as in the FAX mode.

SW-I3 No. 5 ~ No. 7 Reserved

Set to "0".

SW-I3 No. 8 Transfer dial recall

If this switch is set to "1", machine disables redial in Transfer function.

SW-I4 No. 1 ~ No. 4 AGC maximum gain (Line)
(10 ~ 25dB) (1dB step)

The AGC Maximum Gain limits the gain applied by the AGC. Messages with average energy below the AGC Energy Reference Level will have their average energy level increased by no more than the AGC Maximum Gain. The AGC Maximum Gain should average energy of the message with the lowest average energy to the AGC Energy Reference Level.

SW-I4 No. 5 ~ No. 8 AGC maximum gain (Mic)
(10 ~ 25dB) (1dB step)

The AGC Maximum Gain limits the gain applied by the AGC. Messages with average energy below the AGC Energy Reference Level will have their average energy level increased by no more than the AGC Maximum Gain. The AGC Maximum Gain should average energy of the message with the lowest average energy to the AGC Energy Reference Level.

SW-I5 No. 1 ~ No. 4 AGC energy reference level access code (Line)
(-0 ~ -30dB) (2dB step)

The AGC Energy Reference Level controls the playback level. Any message having average speech energy above the energy reference level has its playback level attenuated, and any level has its playback level increased. If the playback level is too high (low), then decreasing (increasing) the AGC Energy Reference Level will achieve the desired level.

SW-I5 No. 5 ~ No. 8 AGC energy reference level access code (Mic)
(-0 ~ -30dB) (2dB step)

The AGC Energy Reference Level controls the playback level. Any message having average speech energy above the energy reference level has its playback level attenuated, and any level has its playback level increased. If the playback level is too high (low), then decreasing (increasing) the AGC Energy Reference Level will achieve the desired level.

SW-I6 No. 1 ~ No. 4 AGC gain adaptation threshold (Line)

The AGC adjusts the amount of gain applied to the incoming message only when the average energy exceeds the AGC Gain Adaptation Threshold. The AGC Gain Adaptation Threshold prevents message background noise from corrupting the gain provided that the AGC Gain Adaptation Threshold is greater than the background noise energy. In the event that a message has background noise energy greater than the AGC Gain Adaptation Threshold, the AGC Gain can be no greater than the AGC Maximum Gain. Note that the AGC Gain Adaptation Threshold must always be greater than the RPACS VOX Turn-On Threshold.

SW-I6 No. 5 ~ No. 8 AGC gain adaptation threshold (Mic)

The AGC adjusts the amount of gain applied to the incoming message only when the average energy exceeds the AGC Gain Adaptation Threshold. The AGC Gain Adaptation Threshold prevents message background noise from corrupting the gain provided that the AGC Gain Adaptation Threshold is greater than the background noise energy. In the event that a message has background noise energy greater than the AGC Gain Adaptation Threshold, the AGC Gain can be no greater than the AGC Maximum Gain. Note that the AGC Gain Adaptation Threshold must always be greater than the RPACS VOX Turn-On Threshold.

SW-I7 No. 1, No. 2 AGC slew rate (Line)

The AGC Slew Rate controls the convergence of the message playback level to the desired playback level. A large slew rate will allow faster convergence and a small slew rate will allow slower convergence.

SW-I7 No. 3, No. 4 AGC slew rate (Mic)

The AGC Slew Rate controls the convergence of the message playback level to the desired playback level. A large slew rate will allow faster convergence and a small slew rate will allow slower convergence.

SW-I7 No. 5 ~ No. 8 Reserved

Set to "0".

SW-J1 No. 1, No. 2 Reserved

Set to "0".

SW-J1 No. 3 Sender's phone number setting

Used to make a choice of whether the registered sender's phone number can be changed or not. If the switch is set to "1", new registration of the sender's phone number is disabled to prevent accidental wrong input.

SW-J1 No. 4, No. 5 Reserved

Set to "0".

SW-J1 No. 6 Summer time setting

This is used to set YES/NO of automatic clock adjustment for daylight saving time.

SW-J1 No. 7, No. 8 Ringer volume

Used to adjust ringing volume.

SW-J2 No. 1 ~ No. 3 Reserved

Set to "0".

SW-J2 No. 4, No. 5 Handset receiver volume

Used to adjust the a handset receiver volume.

SW-J2 No. 6 ~ No. 8 Speaker volume (5 stages)

Used to adjust sound volume from a speaker.

SW-J3 No. 1 Reserved

Set to "0".

SW-J3 No. 2 ~ No. 4 Communication result printout (Transaction report)

Every communication, the result can be output. As usual, it is set to print the timer sending communication error alone. If No. 2: 0 No. 3: 1 No. 4: 0 are set, printing is always on (printed even if it is normally ended).

000: Error, timer and memory sending/receiving

001: Sending

010: Continuous printing

011: Not printed

100: Communication error

SW-J3 No. 5 ~ No. 8 OGM/ICM output level to speaker (0dB ~ -15dB) (1dB step)

Used to control OGM and ICM output level to speaker.

SW-K1 No.1, No. 2 Reserved

Set to "0".

SW-K1 No. 3 ~ No. 8 OGM/ICM output level to Line (0dB ~ -32dB) (1dB step)

Used to control OGM and ICM output level to Line.

SW-L1 No. 1 ~ No. 4 Reserved

Set to "0".

SW-L1 No. 5 Cut off mode (COPY mode)

Whether the excessive part is printed on the next recording paper or discarded is selected to copy a document which is longer than the recording paper.

SW-L1 No. 6 A4 Paper enable

The use of recording paper of A4 is enabled.

SW-L1 No. 7 LEGAL and LETTER paper enable

The use of recording paper of LEGAL and LETTER is enabled.

SW-L1 No. 8 Reserved

Set to "0".

SW-L2 No. 1, No. 2 Paper set size

At present size of the recording paper.

SW-L2 No. 3 Automatic reduce of receive

If set to 1, it is reduced automatically when receiving.

SW-L2 No. 4 ~ No. 6 Print contrast

Used for adjustment of print contrast.

SW-L2 No. 7 Reception reduction ratio in case of memory full

This model is designed so that the print is started according to the setting of SW-L2 No.3 when reception of one page is completed. However, if the memory is filled with data before completion of reception of one page, the print is started with the reduction ratio which is set with this switch.

SW-L2 No. 8 Reserved

Set to "0".

SW-M1 No. 1 ~ No. 8 Reserved

Set to "0".

SW-M2 No. 1 ~ No. 8 Reserved

Set to "0".

SW-N1 No. 1 ~ No. 8 Reserved

Set to "0".

SW-N2 No. 1 ~ No. 8 Reserved

Set to "0".

SW-N3 No. 1 ~ No. 8 Reserved

Set to "0".

SW-O1 No. 1 ~ No. 8 Reserved

Set to "0".

SW-O2 No. 1 ~ No. 8 Reserved

Set to "0".

SW-O3 No. 1 ~ No. 8 Reserved

Set to "0".

SW-O4 No. 1 ~ No. 8 Reserved

Set to "0".

SW-O5 No. 1 ~ No. 8 Reserved

Set to "0".

SW-O6 No. 1 ~ No. 8 Reserved

Set to "0".

[3] Troubleshooting

Refer to the service manual of UX-P100U.

[4] Error code table

Refer to the service manual of UX-P100U.

CHAPTER 3. MECHANISM BLOCKS

[1] General description

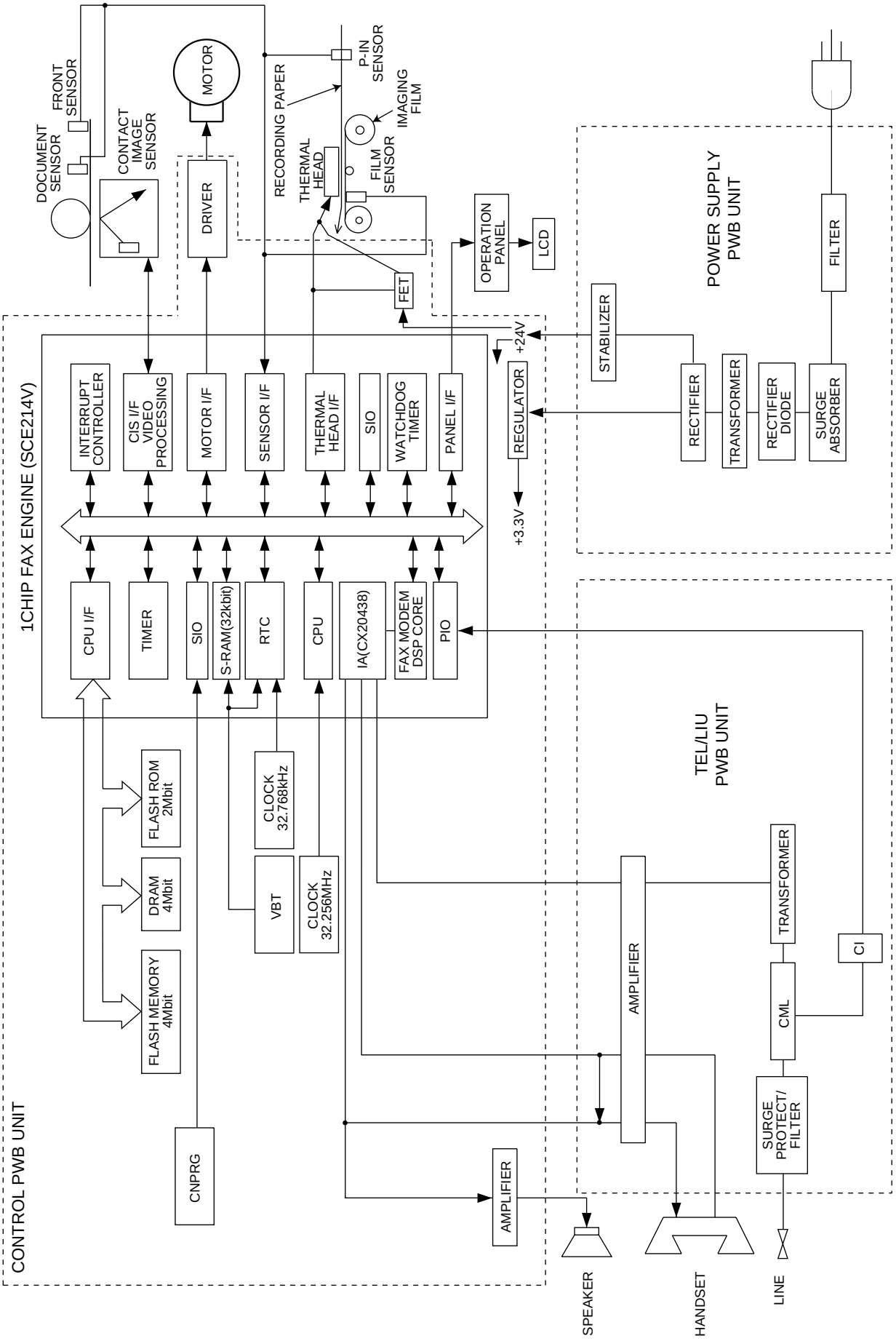
Refer to the service manual of UX-P100U.

[2] Disassembly and assembly procedures

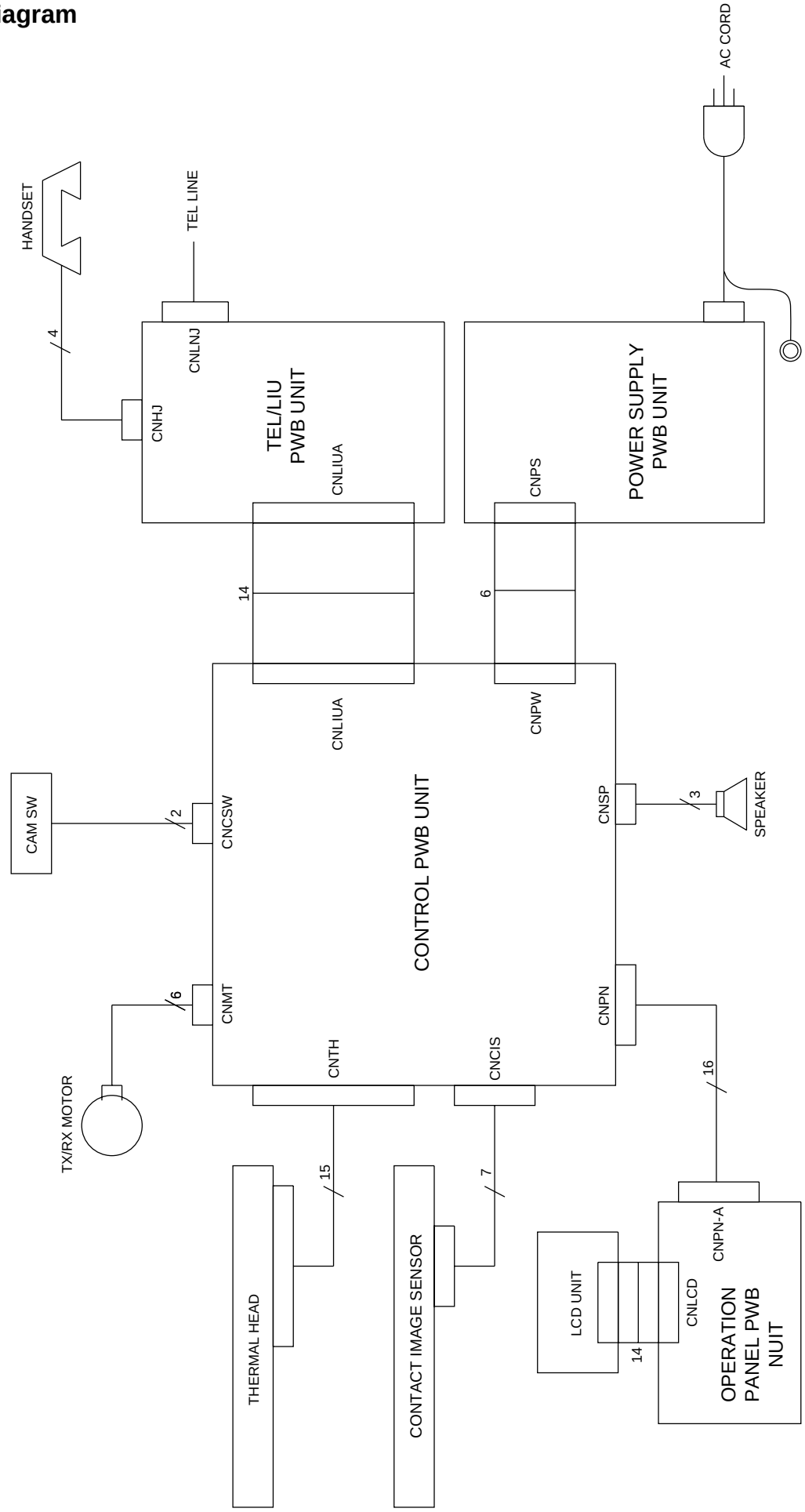
Refer to the service manual of UX-P100U.

CHAPTER 4. DIAGRAMS

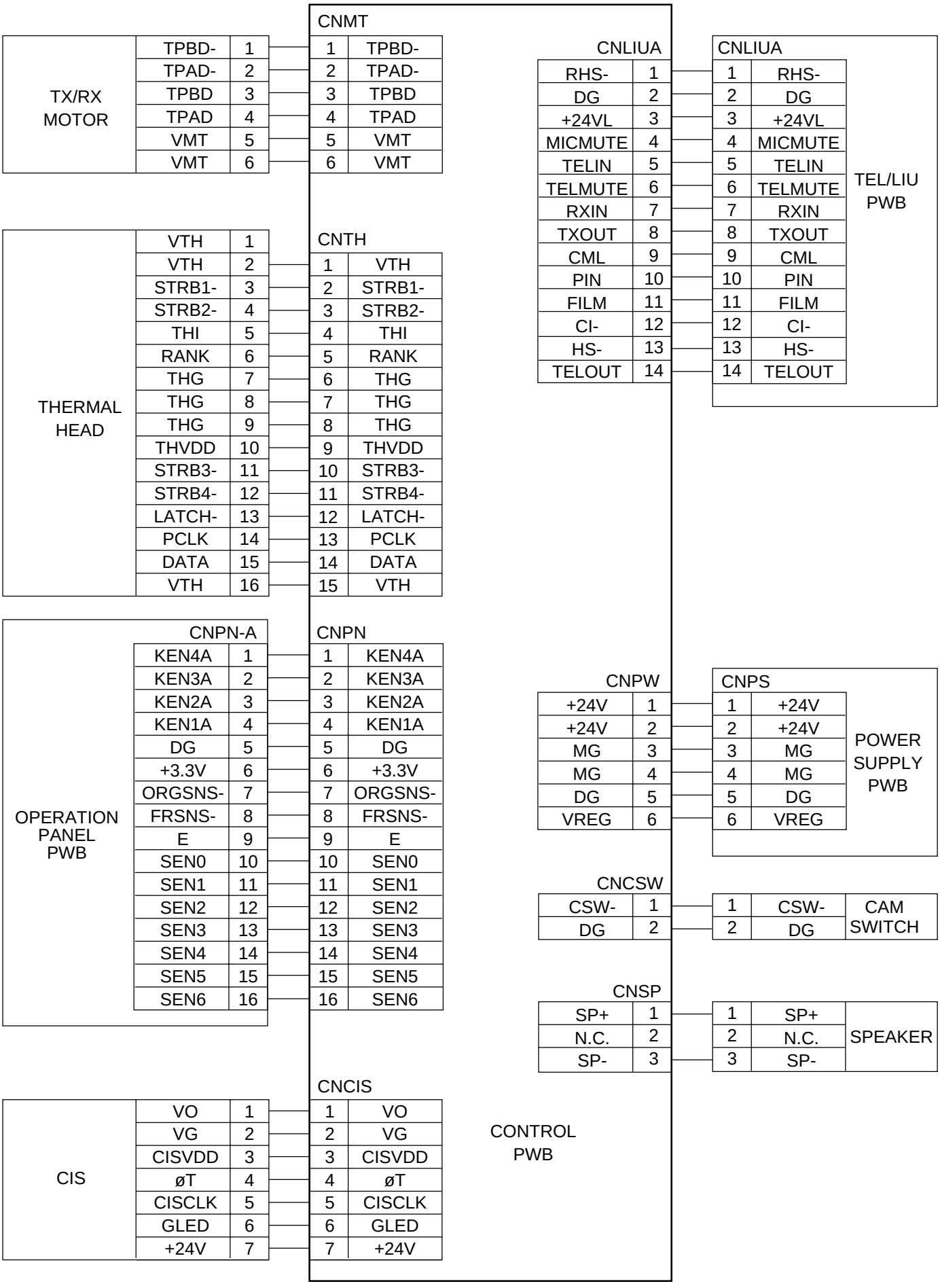
[1] Block diagram



[2] Wiring diagram



[3] Point-to-point diagram


CONTROL PWB
CNMT
TX/RX MOTOR
TPBD- 1 — 1 TPBD-
TPAD- 2 — 2 TPAD-
TPBD 3 — 3 TPBD
TPAD 4 — 4 TPAD
VMT 5 — 5 VMT
VMT 6 — 6 VMT
CNTH
THERMAL HEAD
VTH 1
VTH 2 — 1 VTH
STRB1- 3 — 2 STRB1-
STRB2- 4 — 3 STRB2-
THI 5 — 4 THI
RANK 6 — 5 RANK
THG 7 — 6 THG
THG 8 — 7 THG
THG 9 — 8 THG
THVDD 10 — 9 THVDD
STRB3- 11 — 10 STRB3-
STRB4- 12 — 11 STRB4-
LATCH- 13 — 12 LATCH-
PCLK 14 — 13 PCLK
DATA 15 — 14 DATA
VTH 16 — 15 VTH
CNPN-A
CNPN
OPERATION PANEL PWB
KEN4A 1 — 1 KEN4A
KEN3A 2 — 2 KEN3A
KEN2A 3 — 3 KEN2A
KEN1A 4 — 4 KEN1A
DG 5 — 5 DG
+3.3V 6 — 6 +3.3V
ORGSNS- 7 — 7 ORGSNS-
FRSNS- 8 — 8 FRSNS-
E 9 — 9 E
SEN0 10 — 10 SEN0
SEN1 11 — 11 SEN1
SEN2 12 — 12 SEN2
SEN3 13 — 13 SEN3
SEN4 14 — 14 SEN4
SEN5 15 — 15 SEN5
SEN6 16 — 16 SEN6
CNCIS
CIS
VO 1 — 1 VO
VG 2 — 2 VG
CISVDD 3 — 3 CISVDD
øT 4 — 4 øT
CISCLK 5 — 5 CISCLK
GLED 6 — 6 GLED
+24V 7 — 7 +24V
CNLIUA
CNLIUA
RHS- 1 — 1 RHS-
DG 2 — 2 DG
+24VL 3 — 3 +24VL
MICMUTE 4 — 4 MICMUTE
TELIN 5 — 5 TELIN
TELMUTE 6 — 6 TELMUTE
RXIN 7 — 7 RXIN
TXOUT 8 — 8 TXOUT
CML 9 — 9 CML
PIN 10 — 10 PIN
FILM 11 — 11 FILM
CI- 12 — 12 CI-
HS- 13 — 13 HS-
TELOUT 14 — 14 TELOUT
TEL/LIU PWB
CNPW
CNPS
+24V 1 — 1 +24V
+24V 2 — 2 +24V
MG 3 — 3 MG
MG 4 — 4 MG
DG 5 — 5 DG
VREG 6 — 6 VREG
POWER SUPPLY PWB
CNCSW
CSW- 1 — 1 CSW-
DG 2 — 2 DG
CAM SWITCH
CNSP
SP+ 1 — 1 SP+
N.C. 2 — 2 N.C.
SP- 3 — 3 SP-
SPEAKER

CHAPTER 5. CIRCUIT DESCRIPTION

[1] Circuit description

1. General description

The compact design of the control PWB is obtained by using CONEXANT fax engine in the main control section and high density printing of surface mounting parts. Each PWB is independent according to its function as shown in Fig. 1.

2. PWB configuration

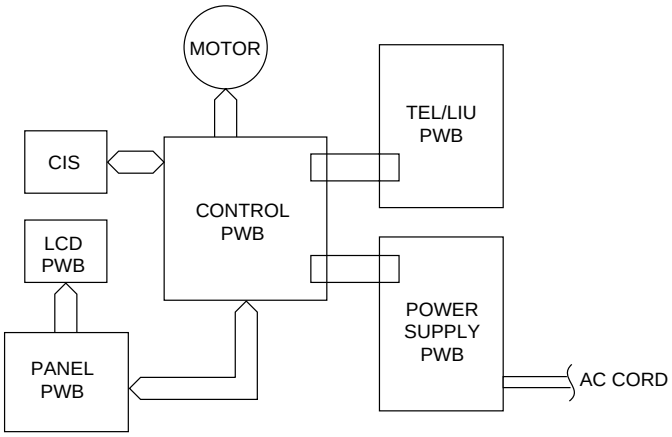


Fig. 1

1) Control PWB

The control PWB controls peripheral PWBs, mechanical parts, transmission, and performs overall control of the unit.
This machine employs a 1-chip modem (SCE214V) which is installed on the control PWB.

2) TEL/LIU PWB

This PWB controls connection of the telephone line to the unit.

3) Power supply PWB

This PWB provides voltages of +5V and +24V to the other PWBs.

4) Panel PWB

The panel PWB allows input of the operation keys.

5) LCD PWB

This PWB controls the LCD display.

3. Operational description

Operational descriptions are given below:

- Transmission operation

  When a document is loaded in stand-by mode, the state of the document sensor is sensed via the 1 chip fax engine (SCE214V). With depression of the START key in the off-hook state, transmission takes place. Then, the procedure is sent out from the modem and the motor is rotated to move the document down to the scan line. In the scan processor, the signal scanned by the CIS is sent to the internal image processor and the AD converter to convert the analog signal into binary data. This binary data is transferred from the scan processor to the image buffer within the RAM and encoded and stored in the transmit buffer of the RAM. The data is then converted from parallel to serial form by the modem where the serial data is modulated and sent onto the line.

- Receive operation

  There are two ways of starting reception, manual and automatic. Depression of the START key in the off-hook mode in the case of manual receive mode, or CI signal detection by the LIU in the automatic receive mode.

  First, the SCE214V controls the procedure signals from the modem to be ready to receive data. When the program goes into phase C, the serial data from the modem is converted to parallel form in the modem interface of the 1 chip fax engine (SCE214V) which is stored in the receive buffer of the RAM. The data in the receive buffer is decoded software-wise to reproduce it as binary image data in the image buffer. The data is DMA transferred to the recording processor within the SCE214V which is then converted from parallel to serial form to be sent to the thermal head. The data is printed line by line by the SCE214V which is assigned to control the motor rotation and strobe signal.

- Copy operation

  To make a copy on this facsimile, the COPY key is pressed when the machine is in stand-by with a document on the document table and the telephone set is in the on-hook state. First, depression of the COPY key advances the document to the scan line. Similar to the transmitting operation, the image signal from the CIS is converted to a binary signal in the DMA mode via the 1 chip fax engine (SCE214V) which is then sent to the image buffer of the RAM. Next, the data is transferred to the recording processor in the DMA mode to send the image data to the thermal head which is printed line by line. The copying takes place as the operation is repeated.

[2] Circuit description of control PWB

1. General description

Fig. 2 shows the functional blocks of the control PWB, which is composed of 4 blocks.

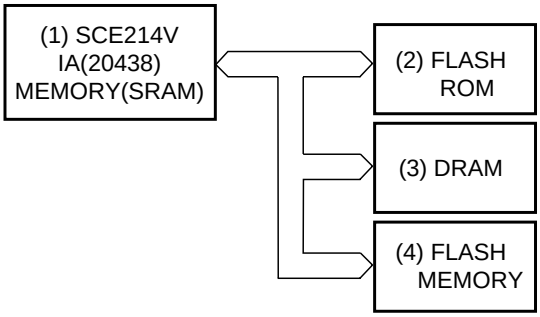


Fig. 2 Control PWB functional block diagram

2. Description of each block

(1) Main control block

The main control block is composed of CONEXANT 1 chip fax engine (SCE214V), FLASH ROM (2Mbit), DRAM (4Mbit) and FLASH MEMORY (4Mbit).
Devices are connected to the bus to control the whole unit.

1) SCE214V (IC3) : pin-176 QFP (FAX CONTROLLER)

1 chip fax engine has Internal Integrated Analog (20438) and Internal memory (SRAM : 32kbit).

2) SST39VF020P (IC1): pin-32 TSOP (FLASH ROM)

FLASH of 2Mbit equipped with software for the main CPU.

3) MSM51V4800E (IC2): pin-28 SOJ (DRAM) (OKI) or IS41LV85125 (IC2): pin-28 SOJ (DRAM) (ISSI)

• Image memory for recording process.

4) SST39VF040P (IC13): pin-32 TSOP (FLASH MEMORY)

A 512 k x 8bit FLASH MEMORY to store the voice and image data when using memory function.

(2) IC3 (SCE214V) Hardware description

A) CONTROL BLOCK

1) Integrated Controller (SCC)

The Controller contains an internal MC24 Processor with a 16-MB address space and dedicated circuitry optimized for facsimile image processing and monitoring and for thermal or thermal transfer printer support.
The CPU provides fast instruction (up to 10 MHz clock speed) execution and memory efficient input/output bit manipulation. The CPU connects to other internal functions over an 8-bit data bus and 24-bit address bus and dedicated control lines.
The 24-bit external address bus, 8-bit data bus, control, status and decoded chip select signals support connection to external ROM, SRAM, DRAM, and FLASH memory.

2) DRAM Controller

The CX06835 includes a DRAM controller with signal and page mode access support which supports fast, normal, or slow refresh time. DRAM memory space is provided in one block up to 4 MB. A maximum of 4 MB of DRAM is supported. This space has a programmable size and starting address. Refresh is performed automatically and is supported in stand-by mode. CAS and RAS signal support is provided for one-DRAM banks for both 4-bit and 8-bit organizations. Access speeds from 50ns to 70ns can be supported.

3) DMA Channels

Six internal DMA channels support memory access for scanner, T.4/T.6, and resolution conversion. DMA Channel 2 can be reprogrammed for external access to thermal printing, thermal transfer, or plain paper inkjet printing.

4) External RAM and ROM

Moveable and programmable size external SRAM memory of up to 1 MB, DRAM memory of up to 4 MB, and ROM of up to 2 MB can be directly connected to the SCE214V. By using an external address decoder, the size of SRAM and/or ROM can be extended. The ROM stores all the program object code.

5) Flash Memory Controller

The SCE214V includes a flash memory controller that supports NOR, NAND, and Serial NAND-type flash memory. The supported size of NOR-type memory is up to 1 MB and the supported size of NAND-type memory is unlimited.

6) Stepper Motor Control

Eight outputs are provided to external current drivers: four to the scanner motor and four to the printer motor. The stepping patterns are programmable and selectable line times are supported. A timeout circuit controls the power control of the motors. The printer or scanner motor outputs can be programmed as GPOs for applications using single motor or paper printers.

7) T.4/T.6 Compression/Decompression

MH, MR and MMR compression and decompression are provided in hardware. T.4 line lengths of up to 8192 pixels are supported. MMR and Alternating Compression/Decompression (ACD) on a line by line basis provide support for up to three independent compression and decompression processes.

8) Bi-level Resolution Conversion

One independent programmable bi-level 1D-resolution conversion block is provided to perform expansion or reduction on the T.4 decompressed data and scan image data. Image expansion can be programmed up to 200% and reduction down to 33%. Vertical line O-Ring and data output bit order reversal is also provided.

9) Printer IF

The Printer Interface provides a standard connection between the SCE214V and a thermal printhead to support thermal printing or thermal transfer. The thermal printer interface consists of programmable data, latch, clock, and up to four strobe signals. Programmable timing supports traditional thermal printers, as well as the latchless split mode printers, and line lengths of up to 2048 pixels. Line times from 5 ms to 40 ms are supported.
The SCE214V includes a thermal ADC (TADC) function utilizing a D/A converter and a comparator to monitor the printhead temperature. External terminating resistors must be supplied; the values are determined by the specific printhead selected.
As an option, plain paper inkjet printing can be supported.

10) TPH Hardware Timer

The TPH hardware timer provides a 500 ms timer that can be re-triggered or reset.

11) Scanner and Video Control

Five programmable control and timing signals support common CCD and CIS scanners. The video control function provides signals for controlling the scanner and for processing its video output. Three programmable control signals (START, CLK1n, and CLK2) provide timing related to line and pixel timing. These are programmable with regard to start time, relative delay and pulse width.
Two video control output signals (VIDCTL[1:0]) provide digital control for external signal pre-processing circuitry. These signals provide a per pixel period, or per line period, timing with programmable polarity control for each signal.

12) Video Processing

The CX06835 supports two modes of shading correction for scanner data non-uniformity arising from uneven sensor output or uneven illumination. Corrections are provided on either an 8-pixel group or are applied separately to each pixel. Dark level correction and gamma correction are also provided.
Two-dimensional Error Diffusion/Dithering is performed on halftone images.
The CX06835 includes an 8 x 8 dither table, which is programmable and stored internally (8-bit per table entry). The table is arranged in a matrix of 8 rows by 8 columns. The video processing circuit provides mixed-mode detection/processing and multi-level Resolution Conversion for the scanner multi-level data. The conversion ratio of the multi-level Resolution Conversion is fixed to B4-A4 conversion.

13) Operator Panel Interface

Operation Panel functions are supported by the operator output bus OPO[6:0], the operator input bus OP[3:0], and two control outputs (LCDCS and LEDCTRL).
The CX06835 can directly interface to a 28-key keypad.
A 2-line LCD display module with 20 characters per line can be supported.

14) Synchronous Serial Interface (SSIF)

One or optionally two Synchronous only Serial Interfaces (SSIF) are built into the CX06835, which allows it to communicate with external peripherals. Each SSIF provides separate signals for Data (SSTXD, SSRXD), Clock (SSCLK), and Status (SSSTAT). Each SSIF is a duplex, three-wire system. The SSIF may be configured to operate as either a master or a slave interface. The bit rate, clock polarity, clock phase, and data shifting order are programmable.

15) Synchronous/Asynchronous Serial Interface (SASIF)

One or optionally two Synchronous/Asynchronous Serial Interface (SASIF) performs the following:
- Serial-parallel conversion of data received from a peripheral device.
- Parallel-to-serial conversion of data for transmission to a peripheral device.

This interface consists of serial transmit data (SASTXD), serial receive data (SASRXD), and a serial clock(SASCLK). The SASIF includes a programmable bit rate generator for asynchronous and synchronous operations. The data shifting order, data bit number, and the SASCLK polarity are programmable.
The optional SASIF 2 has an additional pin called DSS_AVAIL. This signal can be used to tristate the SASCLK2 and SASTXD2 signals.

16) Real Time Clock (RTC)

The CX06835 includes a battery backup real time clock. The RTC will automatically maintain the proper date and time for 32 years. Leap year compensation is included. A 32.768 kHz or 65.536 kHz crystal is required by the RTC.

17) Tone Generator (ALT_TONE)

The CX06835 provides a programmable tone generator output. The frequency of the tone generator is programmable from 400 Hz to 4 kHz. By using a PWM programmable high frequency as a modulation frequency, the output level can be made programmable.

18) Watchdog Timer

The Programmable Watchdog Timer is intended to guard against firmware lockup on the part of either executive-controlled background tasks or interrupt-driven tasks, and can only be enabled by a sequence of events under control of the Watchdog Control Logic. Once the Watchdog Timer has been enabled, it can not be disabled unless a system reset occurs.

19) Reset and Power Control

The RESETn I/O pin provides an internally generated reset output to external circuits, or it can accept an externally generated reset signal. This reset signal will not reset the RTC. Separate RTC battery power inputs are provided for battery-backup functions. A BATRSTn pin is provided, which resets the RTC circuits and other SCC circuits.

20) Power Up/Down Control

Power Up/Down detection is provided internally. The threshold voltages are:
- Power Up detection level = 2.83V to 2.95V.

An internally generated power down signal controls internal switching between primary and battery power. This control signal is also provided as an output on the PWRDWNn pin. An externally generated power down detector (optional) can be provided as an input on the PWRDWNn pin by setting the INTPWRDWNEn pin.

21) Stand-by and Sleep Modes

Two power saving modes are provided to reduce the power consumption. In stand-by mode, the CPU is functional, but the modem clock is turned off to save power. When this occurs, the modem may be activated by software under different conditions. In sleep mode, the clock is cut off from both the modem and the CPU to increase the power savings.
The system can be activated by paper insertion, key pressing events, and telephone ring detection.

22) Embedded Modem DSP

The embedded modem DSP is a synchronous 14400 bps half-duplex modem with error detection and DTMF generation/reception. It provides data transmission/reception from regular PSTN lines, PBX, or private lines.
The modem can operate at any standard V.29 data speed up to 9600 bps as well as in V.21 and V.23 modes.
The modem is designed for use in Group 3 facsimile machines. It satisfies the requirements specified in ITU-T recommendations V.29, V.27ter, V.21 Channel 2, and T.4 , and meets the signaling requirements of T.30. It also performs HDLC framing according to T.30 at all speeds.

Note: For technical details, refer to the FM209/FM214 Designer's Guide, (document 1175).

23) Software and Firmware Support Features

Available software and embedded firmware provides the following:
- Modem support for speeds up to 14400 bps.
- ECM under conditional assembly.
- DRAM memory support under conditional assembly.
- MH, MR and MMR support.
- Page memory receiving.
- 5 ms minimum scan line time.
- Conditional Error Diffusion or Dither table (8x8) support.
- Dark Level Correction support.
- Single motor support.
- 28-key operator panel support.
- Call progress support for Europe and U.S.A.
- Monochrome inkjet print engine support.

B) Modem block

1) Facsimile Modem

The modem can operate at 14400, 12000, 9600, 7200, 4800, 2400, or 300 bps, and can perform HDLC framing per T.30 at all rates. A programmable DTMF detector, three programmable tone detectors, V.21 Channel 2 FSK 7E flag detector, Caller ID demodulator and ring detector are provided.

2) Voice and Audio Codecs

The voice coder/decoder (codec) compresses voice at an average rate of 2.9 kbps which provides 24 minutes of stored voice messages in 4 Mbits of memory. But for UX-A260U, a part of memory is used for other uses. So the total recording time is shortened at about 20 minutes. This voice codec allows the host controller to efficiently store and playback digital incoming messages (ICMs), outgoing messages (OGMs).

The ADPCM audio codec compresses audio signals (music/voice) at 32 kbps or 24 kbps and the PCM audio codec records audio signals at 128 kbps or 64 kbps for highest fidelity coding and reproduction.

Selectable error correction coding allows storage in audio grade RAMs (ARAMs). Echo cancellation techniques employed during playback allow DTMF tone and Type II Caller ID CAS detection during voice/audio codec operation to support user selectable features. The coder can record messages from the PIA or SIA. The decoder can playback messages to the PIA or both the PIA and SIA. Dual/signal tone transmission is available when the decoder is disabled.

3) V.23 Full-duplex Modem and Caller ID

Both full-duplex transmit and receive (with asymmetric 1200/75 bps connection) and half-duplex (1200 bps) asynchronous V.23 are supported, as will as both serial and parallel interfaces to the modem. The V.23 algorithm includes an optional, programmable. receive compromise equalizer which is active in both V.23 and Caller ID (V.23 Receive only) modes.

Common applications for V.23 include France's Minitel and Japan's Lowest Cost Routing.

4) Features

- Group 3 facsimile transmission/reception
  - ITU-T V.17 and V.33
  - ITU-T V.29, V.27 ter, T.30, V.21 Channel 2, T.4
  - ITU-T V.17 and V.27 ter short train
  - HDLC framing at all speeds
  - Receive dynamic range: 0 dBm to -43 dBm
  - Automatic adaptive equalization
  - Fixed and programmable digital compromise equalization
  - DTMF detect and tone detect
  - ITU-T V.21 Channel 2 FSK 7E Flag Detect
  - Ring detector
  - Programmable transmits level
  - Programmable single/dual tone transmission
- Voice codec
  - 24 minutes of voice storage per 4 Mbit memory
  - Near toll quality voice recording and playback
  - Programmable AGCs
  - Programmable line/microphone input and line/speaker output filters
  - Error correction coding allows ARAM usage
  - DTMF detect, tone detect, and tone transmit
  - Type II Caller ID CAS detection
  - Pitch synchronized fast and slow playback
  - Near-end echo cancellation
- ADPCM Audio codec
  - High fidelity recording and playback of audio signals
  - 32 kbps and 24 kbps
  - Programmable AGCs
  - Programmable line/microphone input and line/speaker output filters
  - DTMF detect, tone detect, and tone transmit
  - Type II Caller ID CAS detection
  - Near-end echo cancellation
- PCM audio codec
  - 128 kbps and 64 kbps
  - DTMF detect and tone detect
  - Type II Caller ID CAS detection
  - Near-end echo cancellation
- V.23 and Type I Caller ID
  - Full-duplex modes:
    TX = 75 bps. RX = 1200 bps
    TX = 1200 bps. RX = 75 bps
  - Half-duplex mode:
    TX = RX = 1200 bps
  - Serial and parallel data modes
  - Programmable parallel data mode
  - 5, 6, 7, or 8 data bits
  - 1 or 2 Stop bits
  - Mark, Space, Even, or Odd Parity
  - Break function
  - Transmitter squelch
  - Compromise equalizer
- 3.3V/5V operation

5) Integrated Analog Control Resisters for 20438

The 20438 IA can be used as a Primary Integrated Analog (PIA) codec or as a Secondary Integrated Analog (SIA) codec, depending on the signal connection with the SCE Controller ASIC device. In the SCE100 product, both the PIA and the SIA are packaged external to the SCE Controller device, whereas in the SCE214V, the PIA is packaged with the SCE214V Controller and the SIA is external.
The 20438 IA provides gain, filtering, internal analog switching, and an internally sourced microphone bias output. The IA is controlled by three control registers and an address register located in internal RAM space which are accessed via the modem interface memory. These registers provide individual controls for the IA's inputs, outputs, gain settings, and switching.
The registers are located in internal DSP RAM. Each bit of each 8-bit IA control register has exactly the same meaning for the PIA and the SIA. The LSB of each 16-bit address contents is used to control the PIA. The MSB of each 16-bit address contents is used to control the SIA.
The following table the PIA/SIA control register RAM access code.

Register	SBRAMx	BRx	Crx	IOx	AREXx	ADDx	PIA Reg*	SIA Reg*
IACR1	0	0	0	0	0	D0	0	1
IACR2	0	0	0	0	0	D4	0	1
IACR3	0	0	0	0	0	D5	0	1
IAADD	0	0	0	0	0	CE	0, 1	0, 1
NOTES: *Registers to use when x=1. When x=2, add 10h.								

- For changes made to IACR1 to be effective, the host must write to IAADD with a value of 0002h.
- For changes made to IACR2 to be effective, the host must write to IAADD with a value of 0006h.
- For changes made to IACR3 to be effective, the host must write to IAADD with a value of 0007h.

Configuration default values are shown below.

DEFAULT VALUE			
CONFIGURATION	**IACR1**	**IACR2**	**IACR3**
V.17/V.33	1D9Eh	0008h	0000h
V.29	1D9Eh	0008h	0000h
V.27ter	1D9Eh	0008h	0000h
V.21 Ch. 2	1D9Eh	0008h	0000h
V.23/Caller ID	1D9Eh	0008h	0000h
Tone Transmit/Detect	1D9Eh	0008h	0000h
Voice/Audio Codec	0D16h	0008h	0000h
Speakerphone	0D16h	0008h	0000h

The following signal flow block diagram is for a signal IA and it applies to both PIA and SIA.

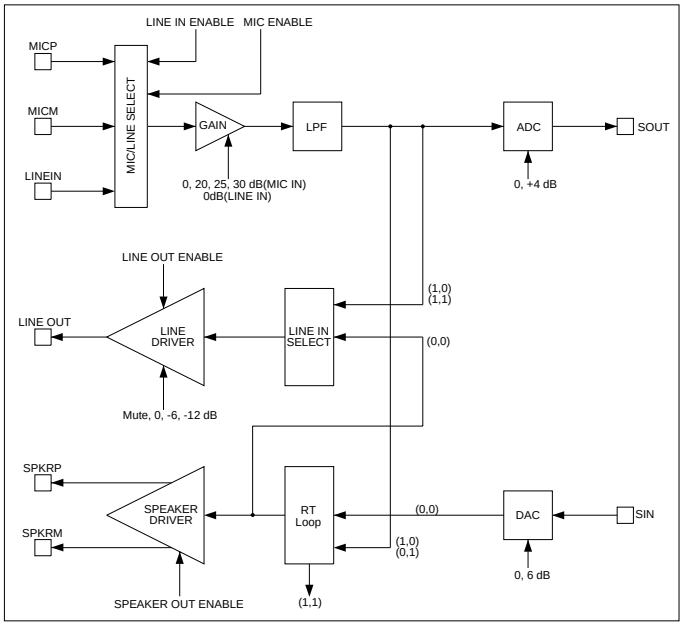


Fig. 3 PIA/SIA Signal Flow Control

SCE214V (IC3) Terminal descriptions

Pin No.	Pin List	I/O	Input Type	Output Type	Pin Description
1	VDDPLL	—	—	—	PLL Power
2	VSSPLL	—	—	—	PLL GND
3	ROMCSn	O	—	13Xs	—
4	SYNC/GPO[20]	O	—	13Xs	—
5	WRn	O	—	13Xs	—
6	RDn	O	—	13Xs	—
7	DEBUGn	I	Hu	—	—
8	TSTCLK	O	—	13Xs	—
9	VSS	—	—	—	Digital GND
10	SXIN	I	Osc0	—	—
11	SXOUT	O	—	Osc0	—
12	OPO[0]/GPO[8]/SMPWRCTRL	O	—	13Xs	—
13	OPO[1]/GPO[9]/PMPWRCTRL	O	—	13Xs	—
14	OPO[2]/GPO[10]/RINGER	OZ	—	13Xs	—
15	OPO[3]/GPO[11]	O	—	13Xs	—
16	OPO[4]/GPO[12]/SSTXD1	O	—	13Xs	—
17	OPO[5]/GPO[13]	O	—	13Xs	—
18	OPO[6]/GPO[14]	O	—	13Xs	—
19	OPI[0]/GPIO[21]/SSRXD1	I/O	Hu	13Xs	—
20	OPI[1]/GPIO[22]/SSSTAT1	I/O	Hu	13Xs	—
21	OPI[2]/GPIO[23]/SSCLK1	I/O	Hu	13Xs	—
22	OPI[3]/GPIO[24]	I/O	Hu	13Xs	—
23	LCDCS/GPO[17]	O	—	1XC	—
24	VDD	—	—	—	Digital Power
25	RASn	O	—	13Xs	—
26	CAS[0]n	O	—	13Xs	—
27	DWRn	O	—	13Xs	—
28	VBAT	—	—	—	RTC Battery Power
29	XIN	I	Osc1	—	—
30	XOUT	O	—	Osc1	—
31	WRPROTn	O	—	1XC	—
32	TEST[1]	I	Hd	—	—
33	TEST[0]	I	Hd	—	—
34	BATRSTn	I	H	—	—
35	INTPWRDWNEn	I	H	—	—
36	PWRDWNn	I/O	H	13Xs	—
37	N.C.	—	—	—	—
38	ADGA	—	VADG	—	PADC Analog GND
39	VREFn/CLREF	I	VR-	—	PADC
40	VIN	I	VA	—	PADC
41	ADGA	—	VADG	—	PADC Analog GND
42	ADVA	—	VADV	—	PADC Analog Power
43	ADXG	—	VXG	—	PADC
44	VREFp	I	VR	—	PADC
45	VSS	—	—	—	VSS Digital GND
46	IVREFn	O	—	VR-	PADC
47	IVREFp	O	—	VR+	PADC
48	VDD	—	—	—	Digital Power
49	THADI	I	Analog	—	TADC
50	VSS	—	—	—	Digital GND
51	GPIO[17]/DSPIRQn	I/O	Hu	13Xs	—
52	GPIO[16]/IRQ[8]	I/O	Hu	13Xs	—
53	GPIO[15]/CS[5]n	I/O	Hu	13Xs	—
54	GPIO[13]/CS[3]n	I/O	Hu	13Xs	—
55	GPIO[37]/IRQ15n/DSPCSn	I	Hu	13Xs	—
56	GPIO[4]/CPCIN/TPHPWRCTRL/DMAREQ	I/O	Hu	13Xs	—
57	STRB[0]	O	—	1XC	—
58	STRB[1]	O	—	1XC	—
59	STRB[2]	O	—	1XC	—
60	STRB[3]	O	—	1XC	—
61	PLAT	O	—	3XC	—
62	PDAT	O	—	2XC	—
63	PCLK/DMAACK	O	—	3XC	—

SCE214V (IC3) Terminal descriptions

Pin No.	Pin List	I/O	Input Type	Output Type	Pin Description
64	VDD	—	—	—	Digital Power
65	GPIO[11]/BE/SERINP/SR4IN	I/O	Hu	13Xs	—
66	GPIO[19]/RDY/SEROUT	I/O	Hu	13Xs	—
67	START	O	—	2XC	—
68	CLK1n/GPO[25]	O	—	13Xs	—
69	CLK2/GPO[24]	O	—	13Xs	—
70	GND	—	—	—	IA GND
71	MCLK	ID	—	—	Main Clock from DSP
72	CTRLI	ID	d	—	Control Data from DSP
73	TESTC	ID	d	—	IA Test
74	SOUT	OD	—	T	Serial Data to DSP
75	SIN	ID	d	—	Serial Data to DSP
76	FSYNC	I/OD	d	—	Frame Sync Signal (IA)
77	POR	IA	d	—	Hardware Reset
78	GND	—	—	—	IA GND
79	LINE_INP	IA	—	—	Analog Input to Line Pre-Amp.
80	MIC_INP	IA	—	—	Positive differential Analog Input to Microphone Pre-Amp.
81	MIC_INM	IA	—	—	Negative differential Analog Input to Microphone Pre-Amp.
82	MIC_BIAS	OA	—	—	2.2 V Nominal DC Bias Source for Electret Microphone
83	BG	OA	—	—	Analog reference Voltage Output
84	VC	OA	—	—	Analog Ground Bias Output
85	AVDD	PWR	—	—	IA Analog Power
86	GND	—	—	—	IA GND
87	LINE_OUTP	OA	—	—	Line Driver Output
88	SPKR_OUTP	OA	—	—	Positive Speaker Driver Output
89	SPKR_OUTM	OA	—	—	Negative Speaker Driver Output
90	DVDD	PWD	—	—	IA Digital Power
91	MODE_0	ID	u	—	Connect to VSS (IA Mode Selection)
92	ICLK	I/OD	—	—	IA Bit Clock Input/Output
93	VSS	—	—	—	VSS Digital GND
94	FCSn[1]/VIDCTL[0]/GPO[23]	O	—	13Xs	—
95	IARESET	O	—	13Xs	DSP to EXTIA POR
96	IACLK	O	—	13Xs	DSP to EXTIA MCLK
97	VDD	—	—	—	Digital Power
98	IA1CLK	I	H	—	DSP from EXTIA ICLK
99	SR3IN/DSPIRQn	I	H	—	DSP from primary EXTIA SOUT/EXT. Modem IRQn
100	SR4OUT	O	—	13Xs	DSP to primary EXTIA SIN
101	SR1IO	O	—	13Xs	DSP to EXTIA CTRL1
102	SA1CLK	I	H	—	DSP from EXTIA FSYNC
103	GPIO[7]/SSRXD2/SASRXD2	I/O	Hu	13Xs	—
104	GPIO[6]/SSTXD2/SASTXD2	I/O	Hu	13Xs	—
105	GPIO[5]/SSCLK2/SASCLK2	I/O	Hu	13Xs	—
106	GPIO[10]/SSSTAT2/DSS_AVAIL	I/O	Hu	13Xs	—
107	VSS	—	—	—	Digital GND
108	RESETn	I/O	Hu	2XC	—
109	GPIO[3]/SASCLK	I/O	Hu	13Xs	—
110	GPIO[2]/SASRXD	I/O	Hu	13Xs	—
111	GPIO[1]/SASTXD	I/O	Hu	13Xs	—
112	GPIO[9]/FRDn	I/O	Hu	13Xs	—
113	GPIO[8]/FWRn	I/O	Hu	13Xs	—
114	A[0]	I/O	Tu	13Xs	CPU Address Bus
115	A[1]	I/O	Tu	13Xs	CPU Address Bus
116	A[2]	I/O	Tu	13Xs	CPU Address Bus
117	A[3]	I/O	Tu	13Xs	CPU Address Bus
118	A[4]	I/O	Tu	13Xs	CPU Address Bus
119	VDD	—	—	—	Digital power
120	A[5]	I/O	Tu	13Xs	CPU Address Bus
121	A[6]	I/O	Tu	13Xs	CPU Address Bus
122	A[7]	I/O	Tu	13Xs	CPU Address Bus
123	A[8]	I/O	Tu	13Xs	CPU Address Bus
124	A[9]	I/O	Tu	13Xs	CPU Address Bus
125	A[10]	I/O	Tu	13Xs	CPU Address Bus
126	A[11]	I/O	Tu	13Xs	CPU Address Bus

SCE214V (IC3) Terminal descriptions

Pin No.	Pin List	I/O	Input Type	Output Type	Pin Description
127	A[12]	I/O	Tu	13Xs	CPU Address Bus
128	A[13]	I/O	Tu	13Xs	CPU Address Bus
129	A[14]	I/O	Tu	13Xs	CPU Address Bus
130	A[15]	I/O	Tu	13Xs	CPU Address Bus
131	A[16]	I/O	Tu	13Xs	CPU Address Bus
132	VDD	—	—	—	Digital Power
133	VSS	—	—	—	Digital GND
134	A[17]	I/O	Tu	13Xs	CPU Address Bus
135	A[18]	I/O	Tu	13Xs	CPU Address Bus
136	A[19]	I/O	Tu	13Xs	CPU Address Bus
137	A[20]	I/O	Tu	13Xs	CPU Address Bus
138	A[21]/EYECLK	I/O	Tu	13Xs	CPU Address Bus
139	A[22]/EYESYNC	I/O	Tu	13Xs	CPU Address Bus
140	A[23]/EYEXY	I/O	Tu	13Xs	CPU Address Bus
141	D[0]	I/O	Tu	13Xs	CPU Data Bus
142	D[1]	I/O	Tu	13Xs	CPU Data Bus
143	D[2]	I/O	Tu	13Xs	CPU Data Bus
144	D[3]	I/O	Tu	13Xs	CPU Data Bus
145	D[4]	I/O	Tu	13Xs	CPU Data Bus
146	D[5]	I/O	Tu	13Xs	CPU Data Bus
147	D[6]	I/O	Tu	13Xs	CPU Data Bus
148	D[7]	I/O	Tu	13Xs	CPU Data Bus
149	GPIO[20]/ALTTONE	I/O	Hu	13Xs	—
150	GPIO[26]	I/O	Hu	13Xs	—
151	GPIO[27]	I/O	Hu	13Xs	—
152	GPIO[28]	I/O	Hu	13Xs	—
153	GPO[26]	O	—	13Xs	—
154	GPO[27]	O	—	13Xs	—
155	GPO[28]	O	—	13Xs	—
156	GPO[29]	O	—	13Xs	—
157	GPO[30]/SR3OUT	O	—	13Xs	—
158	GPIO[29]	I/O	Hu	13Xs	—
159	GPIO[31]	I/O	Hu	13Xs	—
160	GPIO[32]	I/O	Hu	13Xs	—
161	VDD	—	—	—	Digital power
162	GPIO[34]	I/O	Hu	13Xs	—
163	GPIO[35]	I/O	Hu	13Xs	—
164	GPIO[36]	I/O	Hu	13Xs	—
165	Vss	—	—	—	Digital GND
166	VDD	—	—	—	Digital Power
167	PM[0]/GPO[0]	O	—	13Xs	—
168	PM[1]/GPO[1]	O	—	13Xs	—
169	PM[2]/GPO[2]	O	—	13Xs	—
170	PM[3]/GPO[3]	O	—	13Xs	—
171	SM[0]/GPO[4]	O	—	13Xs	—
172	SM[1]/GPO[5]	O	—	13Xs	—
173	SM[2]/GPO[6]	O	—	13Xs	—
174	SM[3]/GPO[7]	O	—	13Xs	—
175	REGDMA/GPO[18]/CLKDIV[0]	I/O	T	13Xs	—
176	WAITn/GPO[19]/CLKDIV[1]	I/O	T	13Xs	—

(3) Panel control block

The following controls are performed by the SCE214V.

- Operation panel key scanning
- Operation panel LCD display

(4) Mechanism/recording control block

- Recording control block diagram (1)

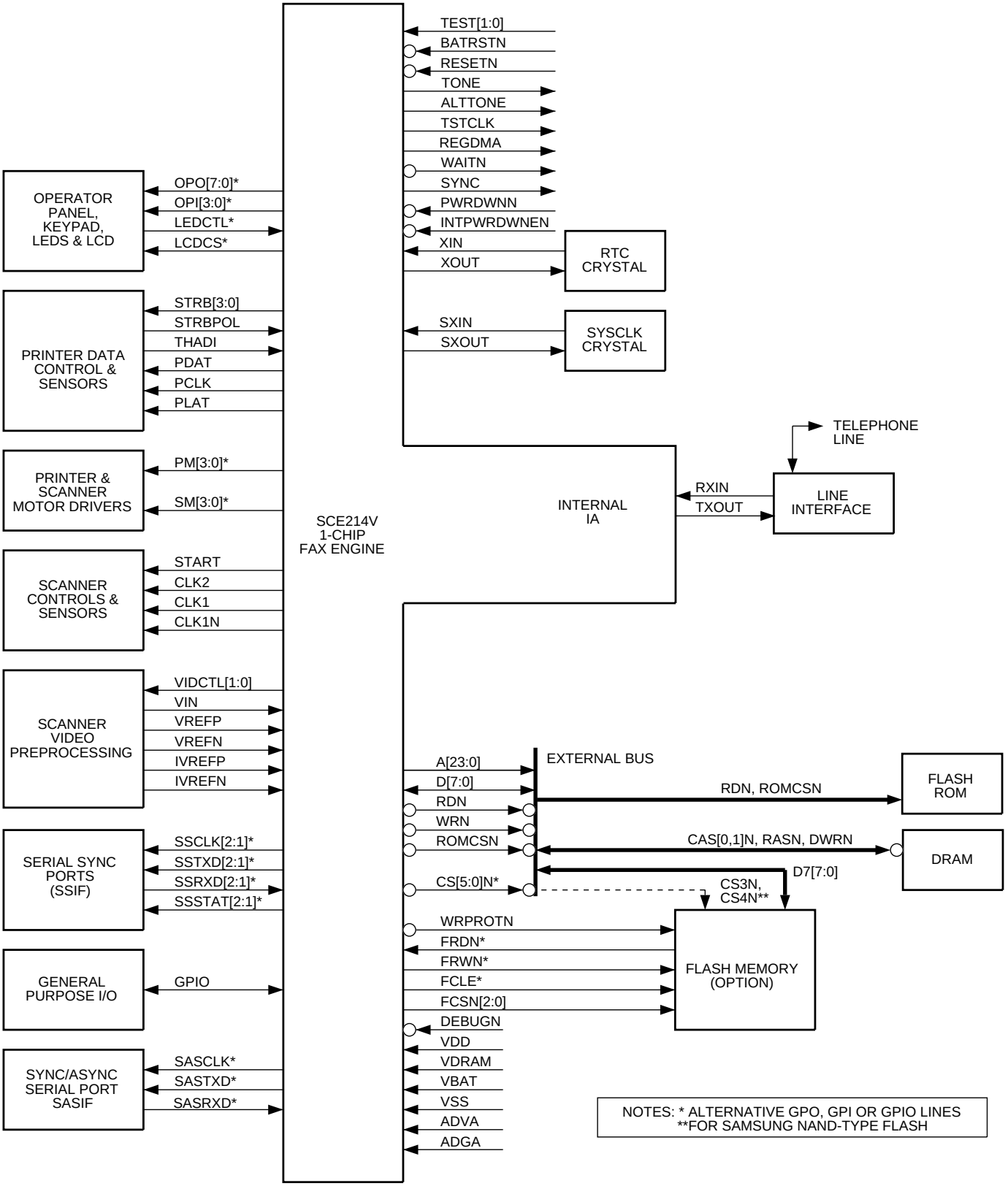


Fig. 4

[3] Circuit description of TEL/LIU PWB

(1) TEL/LIU block operational description

1) Block diagram

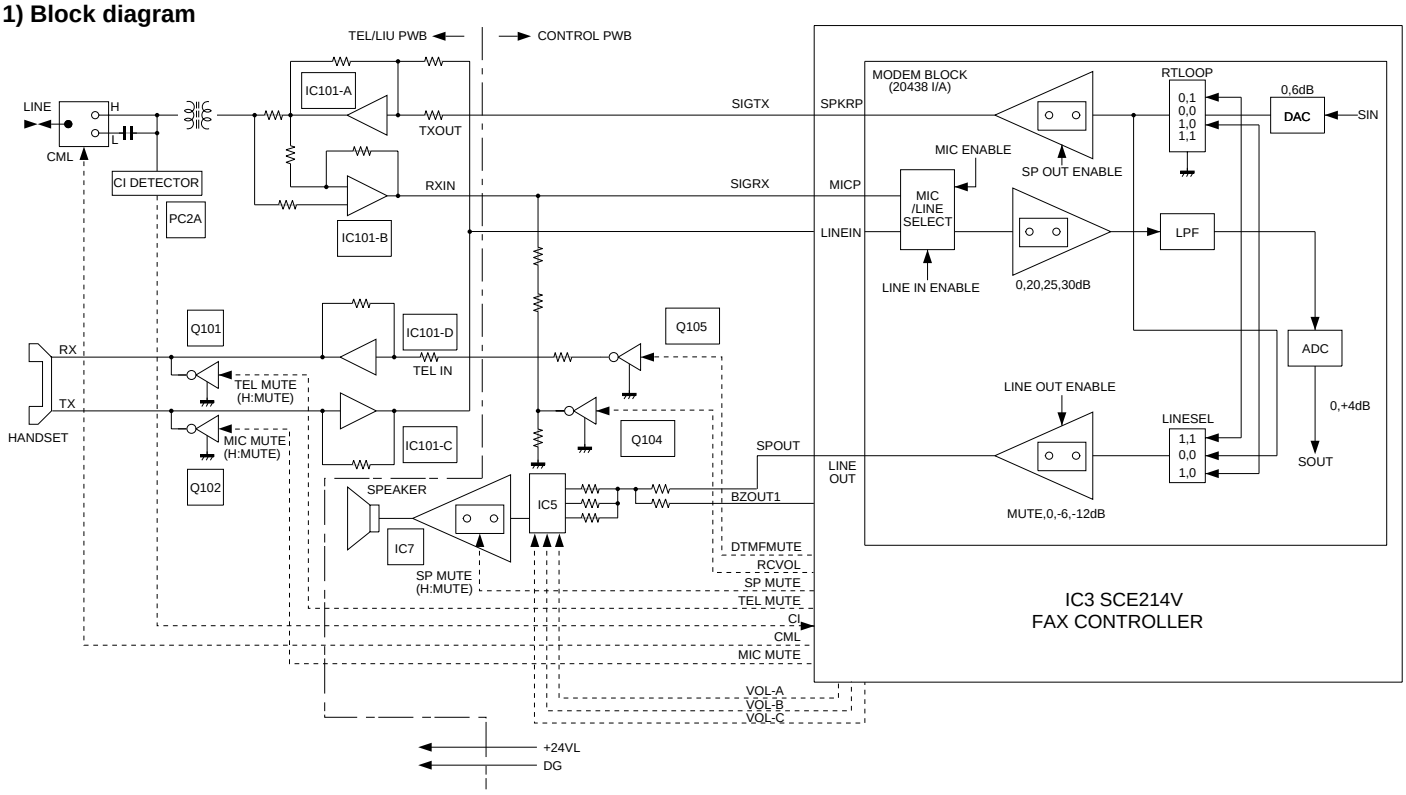


Fig. 5

2) Circuit description

The TEL/LIU PWB is composed of the following 6 blocks.

1. Speech circuit section
2. Dial transmission section
3. Speaker amplifier section
4. Ringer circuit section
5. CI detection circuit
6. Signal/DTMF transmission level & receiving level

3) Block description

1. Speech circuit section

- The receiver volume is an electronic volume type, this model is switched in 3 steps.

2. Dial transmission section

- D.P. transmission: The CML relay is turned on and off for control in the DP calling system. (Refer to the attached sheet.)
- DTMF transmission: It is formed in the modem, and is output.

3. Speaker amplifier section

- Ringer volume :It is controlled by the combination of the attenuator value of the LINE DRIVER in the modem and the ringer sending level sent from the modem.
- Speaker volume :It is controlled by the attenuator value of the IC5 and IC3 (VOL-A,B,C)

4. Ringer circuit section

- The ringer sound is formed in the tone of modem when CI signal is detected. The amplifier circuit drives the speaker of the main body.

5. CI detection circuit

- CI is detected by the photo coupler which is integrated in series in the primary side TEL circuit well proven in the existing unit.

6. Signal/DTMF transmission level & receiving level

- Signal transmission level setting: ATT -8 dB Circuit output: -11 dBm.
- DTMF transmission level setting: HF -2.5 dBm LF -4.5 dBm
  Thus, set the level.

4) Signal selection

The following signals are used to control the transmission line of TEL/FAX signal. For details, refer to the signal selector matrix table.

[Control signals from output port]

<table>
<tr><th>Signal Name</th><th>Description</th></tr>
<tr><td>CML
(The circuit is located in the TEL/LIU PWB.)</td><td><u>Line connecting relay and DP generating relay</u>
H: Line make
L: Line break</td></tr>
<tr><td>SP MUTE
(The circuit is located in the TEL/LIU PWB.)</td><td><u>Speaker tone mute control signal</u>
H: Muting (Power down mode)
L: Muting cancel (Normal operation)</td></tr>
<tr><td>TELMUTE</td><td><u>Handset reception mute control signal</u>
H: Muting
L: Muting cancel</td></tr>
<tr><td>RCVOL
DTMFMUTE
(The circuit is located in the control PWB.)</td><td><u>Handset receiver volume control signal</u>
<table>
<tr><td>Volume</td><td>High</td><td>Middle</td><td>Low</td><td>DTMF sending</td></tr>
<tr><td>RCVOL</td><td>L</td><td>H</td><td>H</td><td>H</td></tr>
<tr><td>DTMFMUTE</td><td>L</td><td>L</td><td>H</td><td>H</td></tr>
</table>
Note: The DTMF sending listed above is DTMF signal sending in the handset OFF-HOOK mode.</td></tr>
</table>

VOLUME SETTING		LINEOUT A		RCVOL	DTME MUTE	VOL A	VOL B	VOL C
		(HIGH)	(LOW)					
Receiver volume setting	Low			1	1			
	Middle			1	0			
	High			0	0			
DTMF Transmission volume setting (Receiver)	Fixed			1	1			
Key buzzer volume setting	Fixed					1	1	1
Speaker volume setting	Level1					0	1	1
	Level2					0	0	1
	Level3					1	1	0
	Level4					0	1	0
	Level5					1	0	0
Ringer volume setting	Low					1	1	1
	Middle					0	0	1
	High					0	0	0
DTMF speaker volume setting	Level1					1	0	1
	Level2					1	0	1
	Level3					1	0	1
	Level4					1	0	1
	Level5					1	0	1
OGM playback speaker volume setting	Level1					0	0	1
	Level2					1	1	0
	Level3					0	1	0
	Level4					1	0	0
	Level5					0	0	0
ICM record speaker volume setting	Level1					0	0	1
	Level2					1	1	0
	Level3					0	1	0
	Level4					1	0	0
	Level5					0	0	0

[Signals for status recognition according to input signals]

Signal Name	Function
$\overline{\text{RHS}}$	H: The handset is in the on-hook state. L: The handset is in the off-hook state.
CI	Incoming call (CI) detection signal

[Other signals]

Signal Name	Function
TEL IN	Receiving signal from line or modem
SPOUT	Speaker output signal
TXOUT	Transmission (DTMF) analog signal output from modem
RXIN	Reception (DTMF, others) analog signal input into modem
TELOUT	Voice input to MODEM from handset.

NO	Signal Name (CNLIUA)	NO	Signal Name (CNLIUA)
1	RHS-	8	TXOUT
2	DG	9	CML
3	+24VL	10	PIN
4	MICMUTE	11	FILM
5	TELIN	12	CI-
6	TELMUTE	13	HS-
7	RXIN	14	TELOUT

(Example: SENDING/RECEIVING)

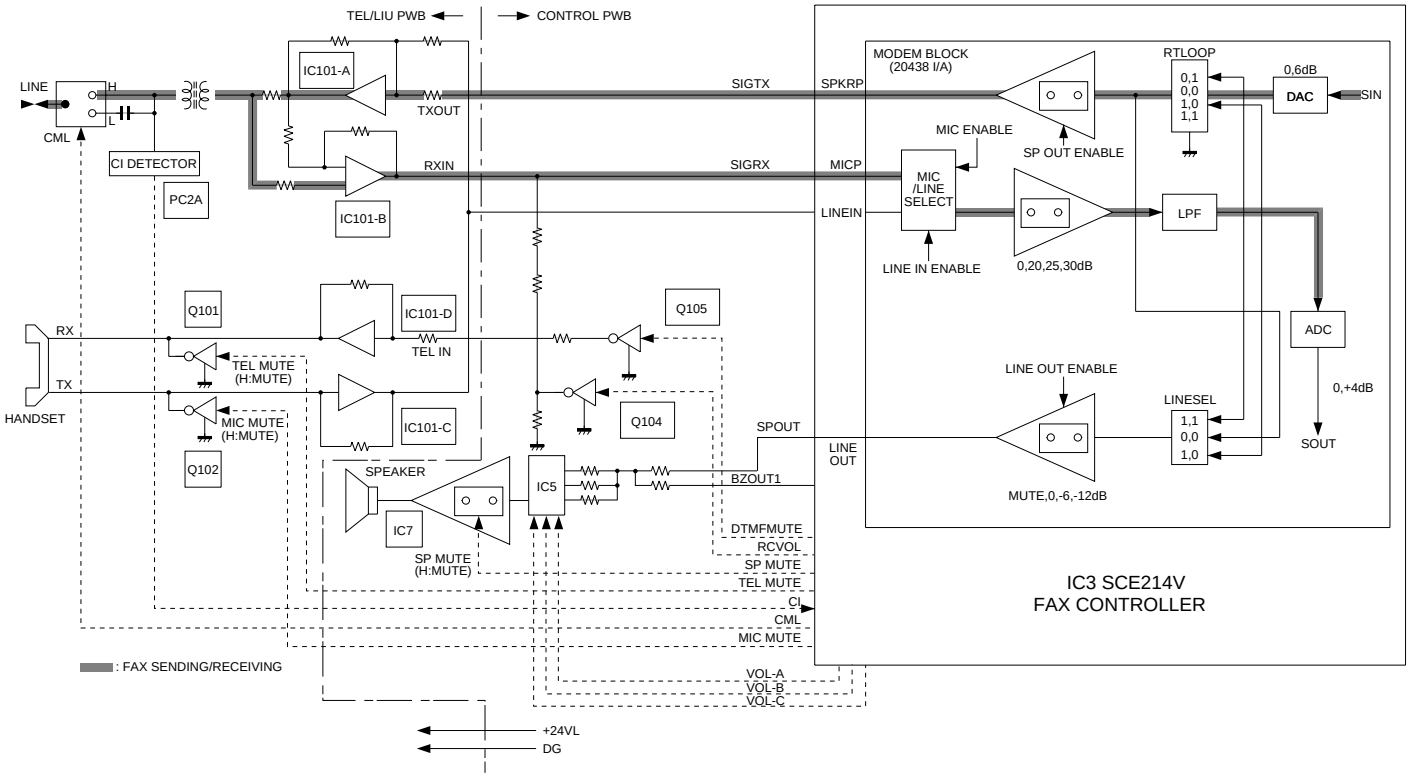


Fig. 6

[4] Circuit description of power supply PWB

1. Block diagram

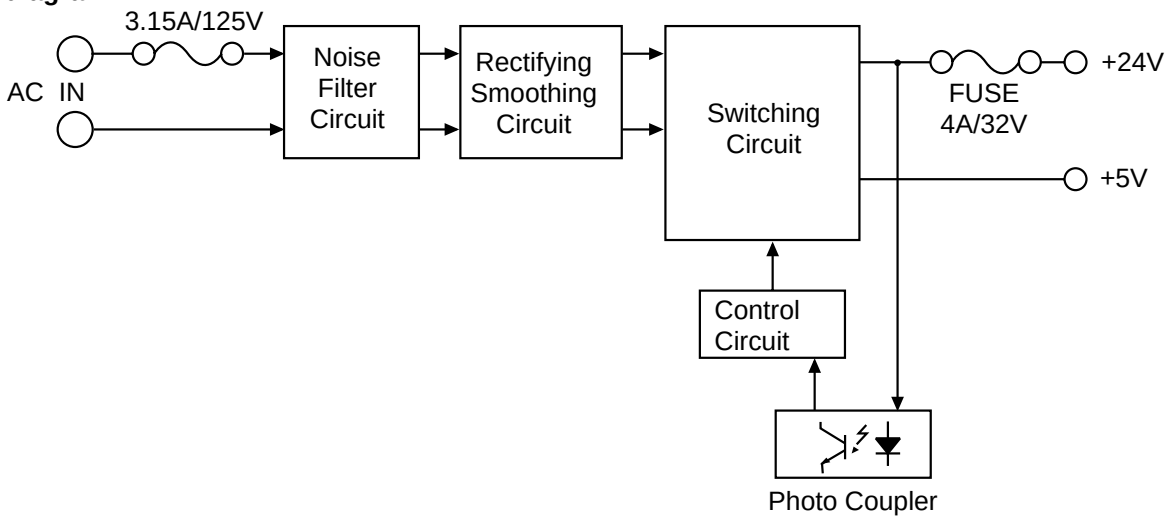


Fig. 7

2-1. Noise filter circuit

The input noise filter section is composed of L1 and C1, which reduces normal mode noise from the AC line and common mode noise to the AC line.

2-2. Rectifying/smoothing circuit

The AC input voltage is rectified by diode D1, 2, 3, 4 and smoothed by capacitor C2 to supply DC voltage to the switching circuit section.

2-3. Switching circuit

This circuit includes MOS FET Q1 and the gate drive circuit, and components around Q1.

In this circuit, the DC voltage supplied from the rectifying/smoothing section is converted into high Frequency pulses by ON/OFF repetition of Q1.

2-4. Control circuit

This circuit controls output voltage of +24V by adjusting ON period of Q1, looking at signal from photo coupler PC1.

In this operation PC1 takes charge of important part.

The over current protection is performed by bringing Q1 to OFF state through detection of voltage of T1 Subwinding.

The over voltage protection is performed by operating the over current protection circuit through detection of Zener diode ZD4 and short-circuiting of load.

2-5. +5V circuit

DC voltage supplied by rectifying the output of transformer T1 with diode D8, C10.

[5] Circuit description of CIS unit

1. CIS

CIS is an image sensor which puts the original paper in close contact with the full-size sensor for scanning, being a monochromatic type with the pixel number of 1,728 dots and the main scanning density of 8 dots/mm.

It is composed of sensor, rod lens, LED light source, light-conductive plate, control circuit and so on, and the reading line and focus are previously adjusted as the unit.
Due to the full-size sensor, the focus distance is so short that the set is changed from the light weight type to the compact type.

2. Waveforms

The following clock is supplied from SCE214V of the control board, and VO is output.

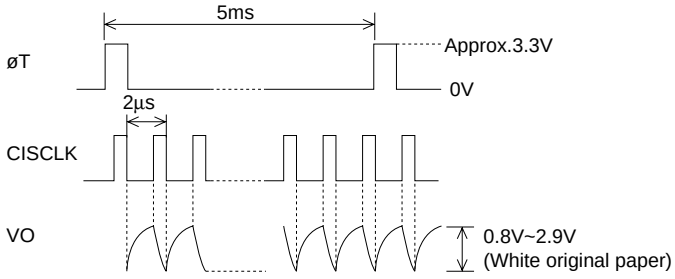
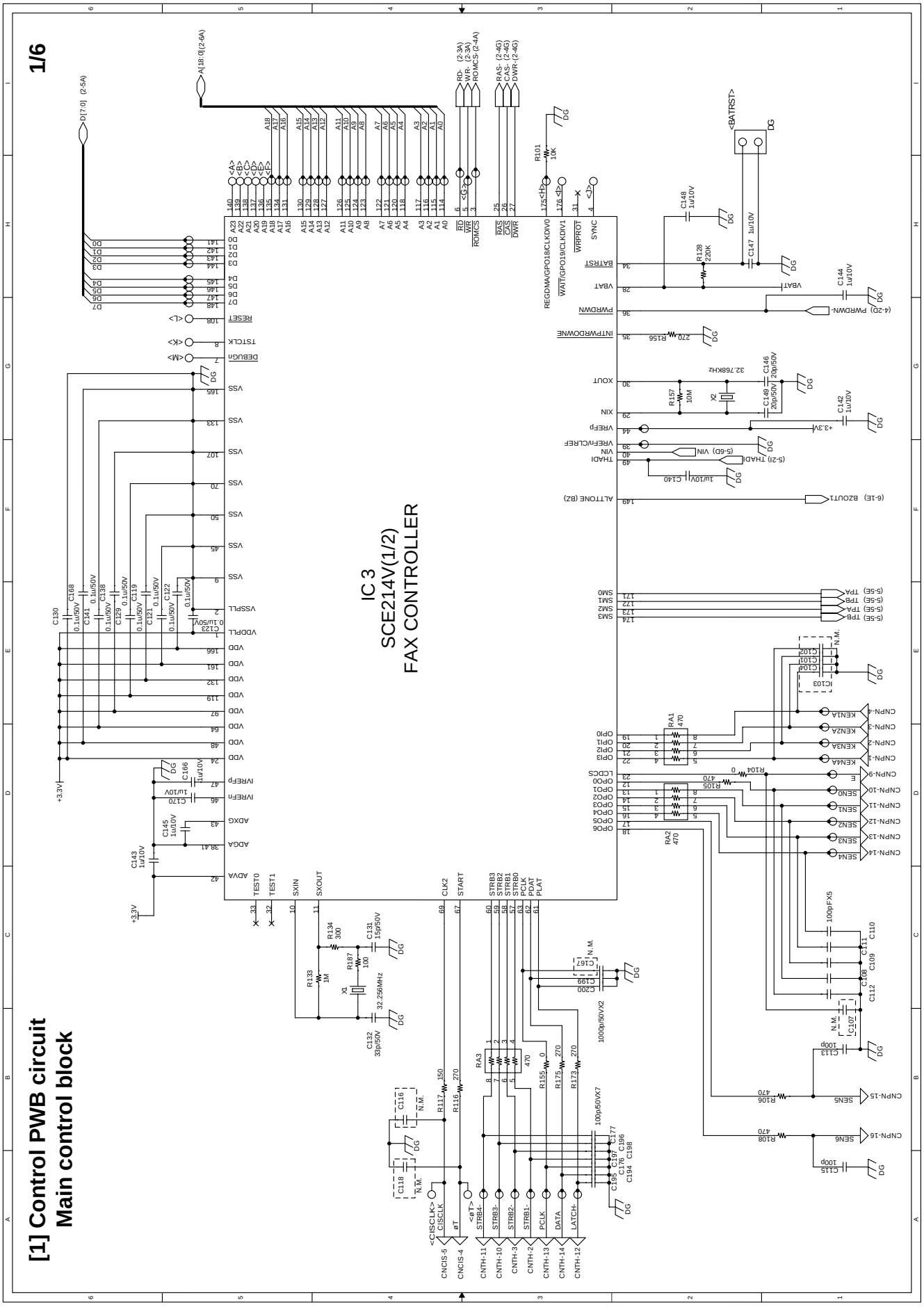
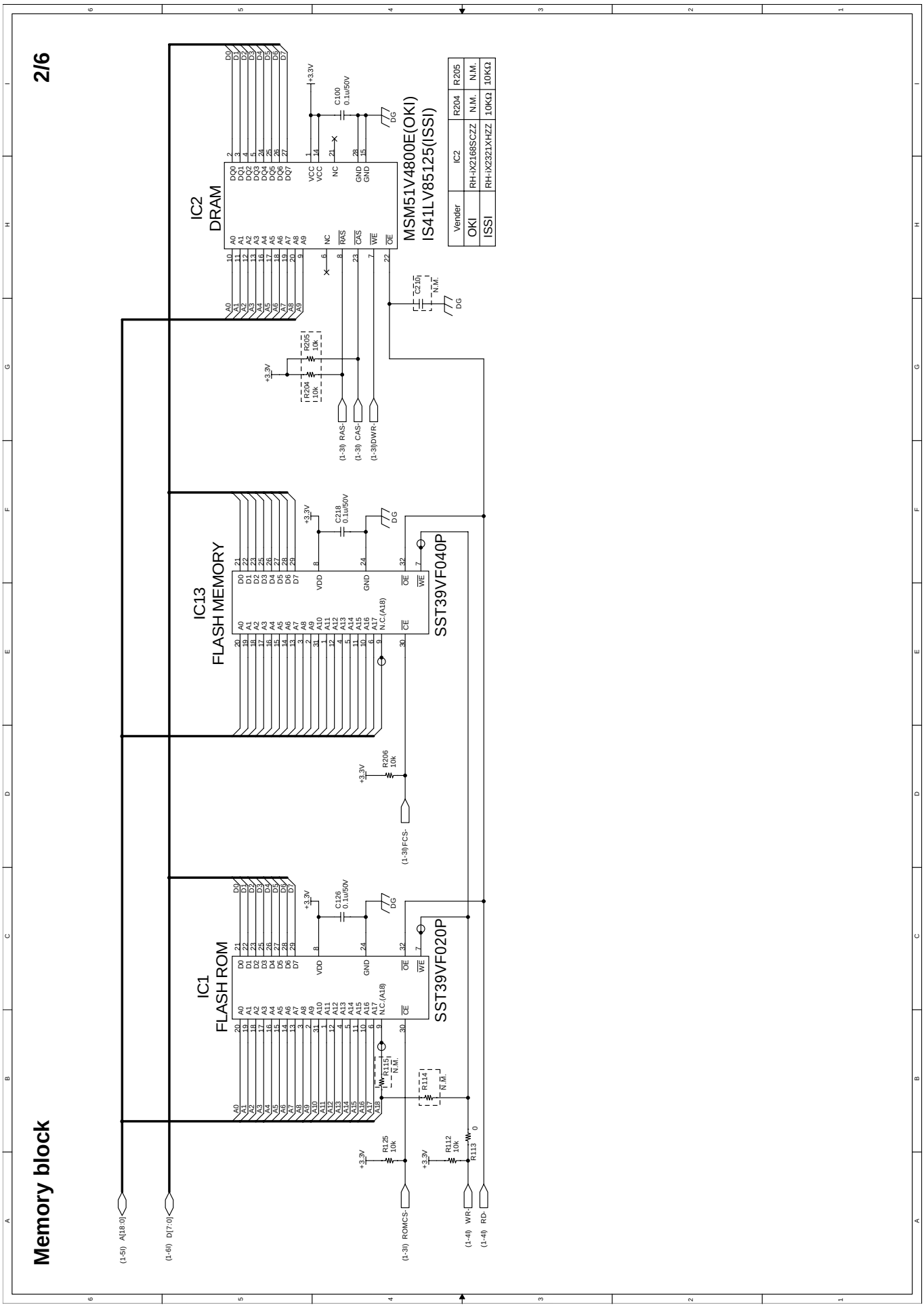


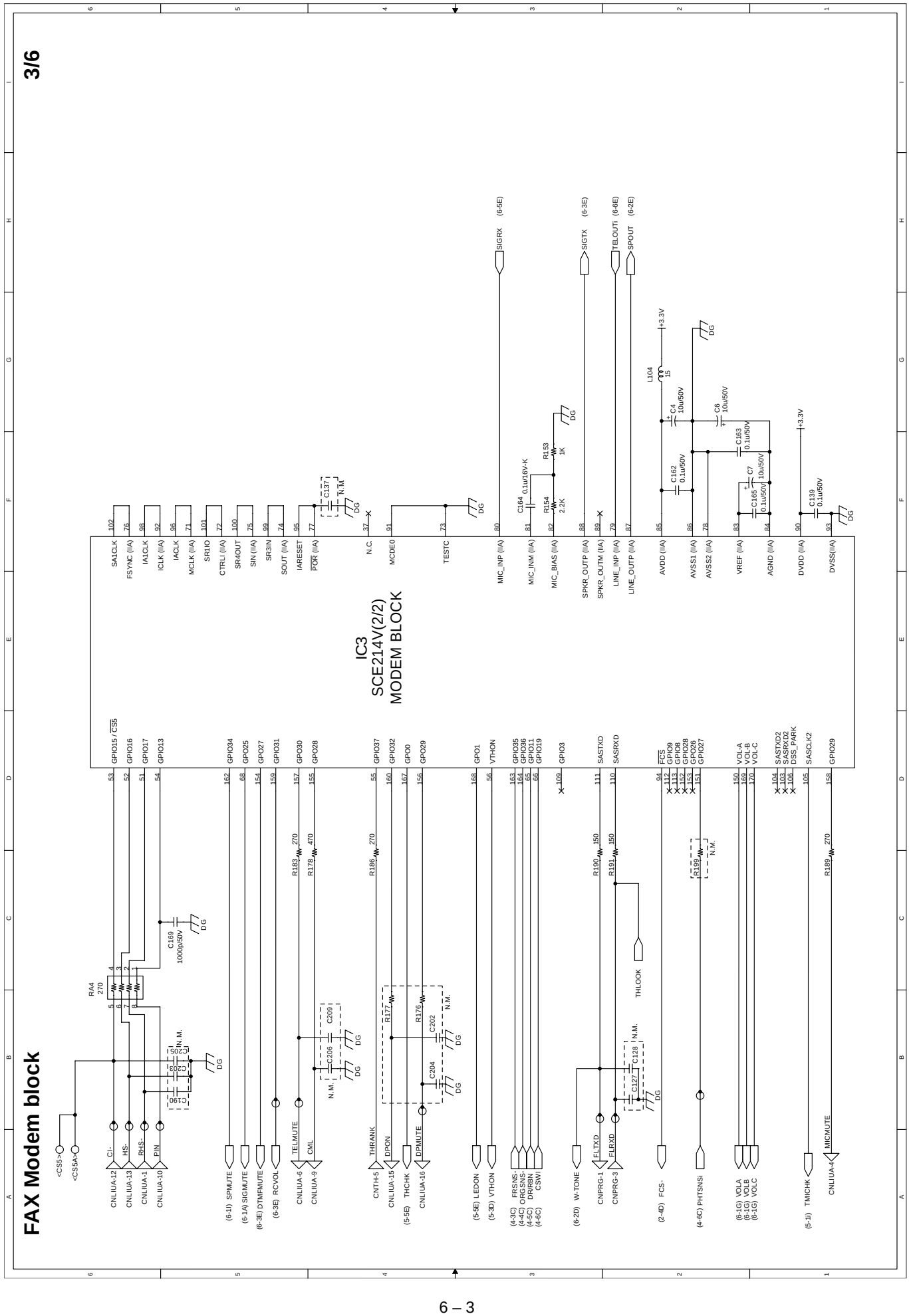
Fig. 8

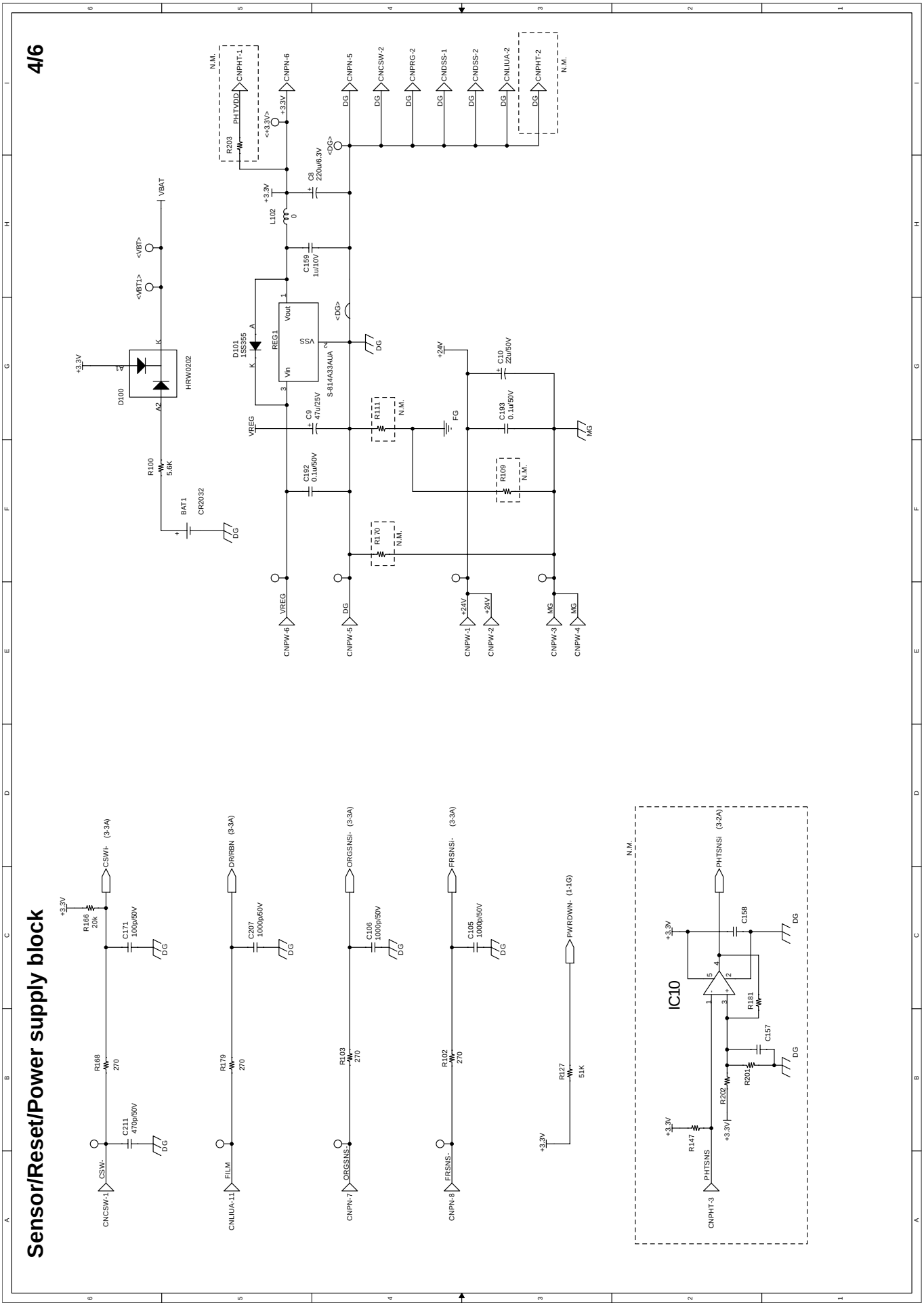
CHAPTER 6. CIRCUIT SCHEMATICS AND PARTS LAYOUT

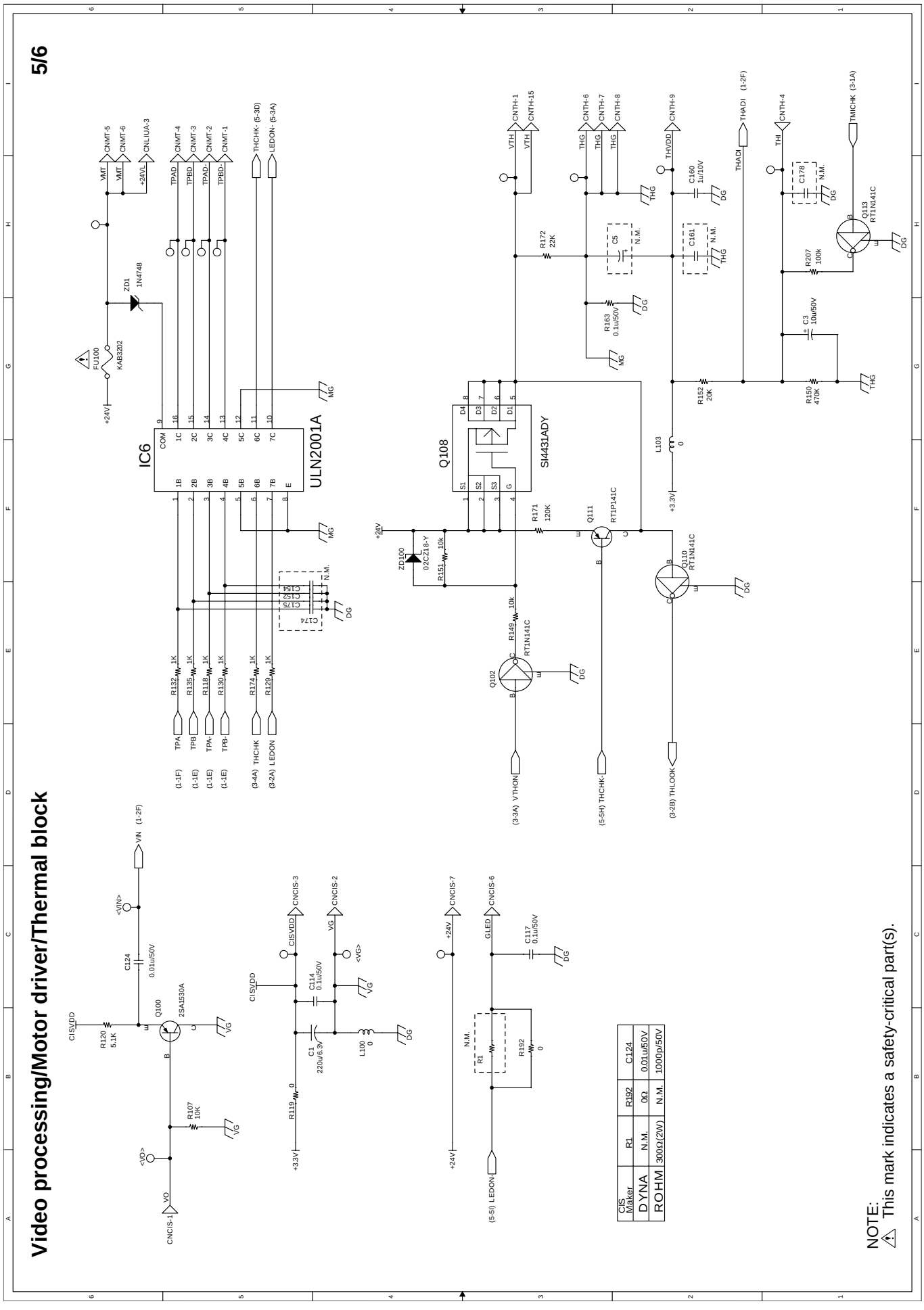


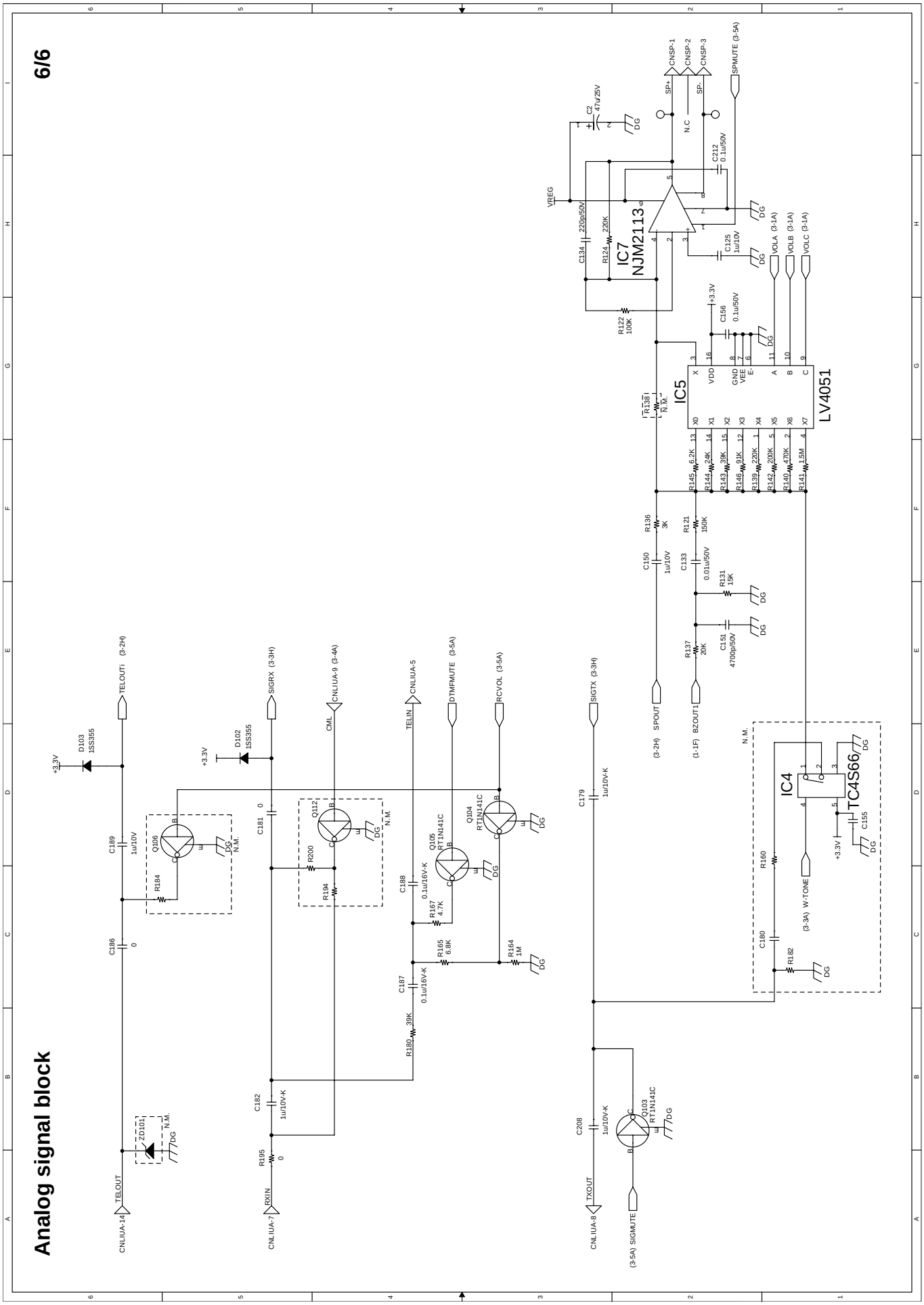


Vender	IC2	R204	R205
OKI	RH-iX2168SCZZ	N.M.	N.M.
ISSI	RH-iX2321XHZZ	10KΩ	10KΩ

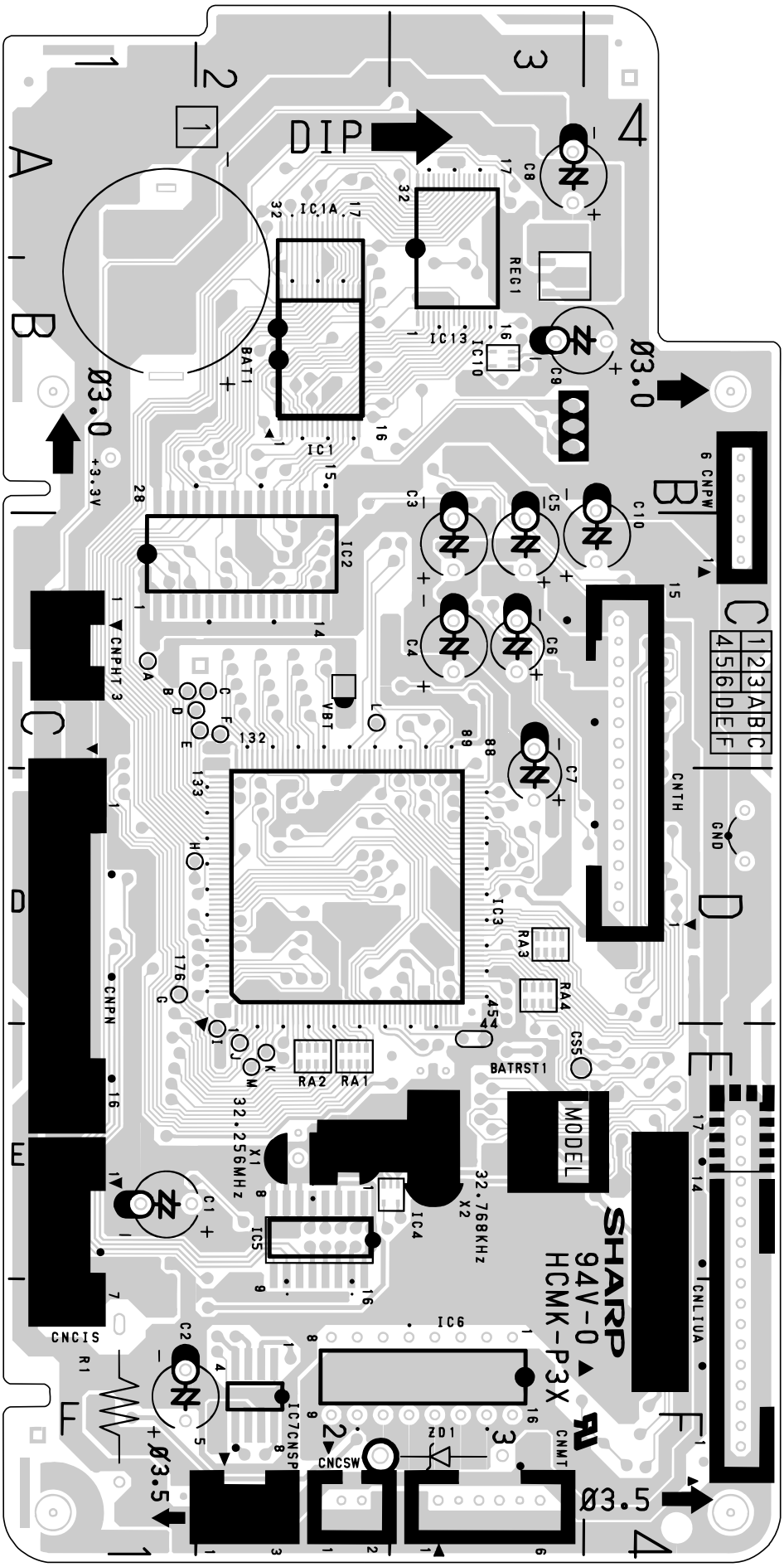

FAX Modem block
3/6
IC3
SCE214V(2/2)
MODEM BLOCK
<CS5>
<CS5A>
CI-
HS-
RHS-
PIN
CNLIUA-12
CNLIUA-13
CNLIUA-1
CNLIUA-10
RA4
270
C190
C203
C205
N.M.
C169
1000p/50V
DG
(6-1I) SPMUTE
(6-1A) SIGMUTE
(6-3E) DTMFMUTE
(6-3E) RCVOL
TELMUTE
CML
CNLIUA-6
CNLIUA-9
R183
R178
270
470
C206
C209
THRANK
DPON
DPMUTE
CNTH-5
CNLIUA-15
CNLIUA-16
(5-5E) THCHK
R177
R176
R186
C204
C202
(5-5E) LEDON
(5-3D) VTHON
(4-3C) FRSNS-
(4-4C) ORSNS-
(4-5C) DRSNS
(4-6C) CSWI
(6-2D) W-TONE
CNPRG-1
CNPRG-3
FLTXD
FLRXD
R190
R191
150
C127
C128
THLOOK
(2-4D) FCS-
(4-6C) PHTSNSi
R199
(6-1G) VOLA
(6-1G) VOLB
(6-1G) VOLC
(5-1I) TMICHK
MICMUTE
CNLIUA-4
R188
SA1CLK
FSYNC (IIA)
IA1CLK
ICLK (IIA)
IACLK
MCLK (IIA)
SR1IO
CTRLI (IIA)
SR4OUT
SIN (IIA)
SR3IN
SOUT (IIA)
IARESET
PDR (IIA)
C137
N.C.
MCDE0
TESTC
MIC_INP (IIA)
MIC_INM (IIA)
MIC_BIAS (IIA)
SPKR_OUTP (IIA)
SPKR_OUTM (IIA)
LINE_INP (IIA)
LINE_OUTP (IIA)
AVDD (IIA)
AVSS1 (IIA)
AVSS2 (IIA)
VREF (IIA)
AGND (IIA)
DVDD (IIA)
DVSS(IIA)
C164
0.1u/16V-K
R154
2.2K
R153
1K
C162
0.1u/50V
C165
C7
0.1u/50V
10u/50V
C163
0.1u/50V
C4
10u/50V
C6
10u/50V
L104
15
+3.3V
C139
0.1u/50V
SIGRX (6-5E)
SIGTX (6-3E)
TELOUTI (6-6E)
SPOUT (6-2E)
GPIO15 / CS5
GPIO16
GPIO17
GPIO13
GPIO34
GPO25
GPO27
GPIO31
GPO30
GPO28
GPIO37
GPIO32
GPO0
GPO29
GPO1
VTHON
GPIO35
GPIO36
GPIO21
GPIO19
GPIO3
SASTXD
SASRXD
FCS
GPO9
GPIO8
GPIO28
GPO26
GPIO27
VOL-A
VOL-B
VOL-C
SASTXD2
SASRXD2
DSS_PARK
SASCLK2
GPIO29


4/6
Sensor/Reset/Power supply block
VBAT
<VBT>
<VBT1>
HRW0202
D100
R100 5.6K
BAT1 CR2032
D101 1SS355
REG1 S-814A33AUA
Vout
Vss
Vin
C159 1u/10V
L102 0
C8 220u/6.3V
C9 47u/25V
C192 0.1u/50V
R111 N.M.
R170 N.M.
R109 N.M.
C10 22u/50V
C193 0.1u/50V
N.M.
R203
PHTVDD
CNPHT-1
CNPHT-2
CNPN-5
CNPN-6
CNCSW-2
CNPRG-2
CNDSS-1
CNDSS-2
CNLIUA-2
CNPW-1
CNPW-2
CNPW-3
CNPW-4
CNPW-5
CNPW-6
R166 20k
C171 100p/50V
R168 270
C211 470p/50V
CSW-
CSW+ (3-3A)
CNCSW-1
R179 270
C207 1000p/50V
DRVRBN (3-3A)
CNLIUA-11
R103 270
C106 1000p/50V
ORGSNS- (3-3A)
CNPN-7
R102 270
C105 1000p/50V
FRSNS- (3-3A)
CNPN-8
R127 51K
PWRDWN- (1-1G)
IC10
R147
R181
R201
R202
C157
C158
PHTSNSi (3-2A)
PHTSNS
CNPHT-3

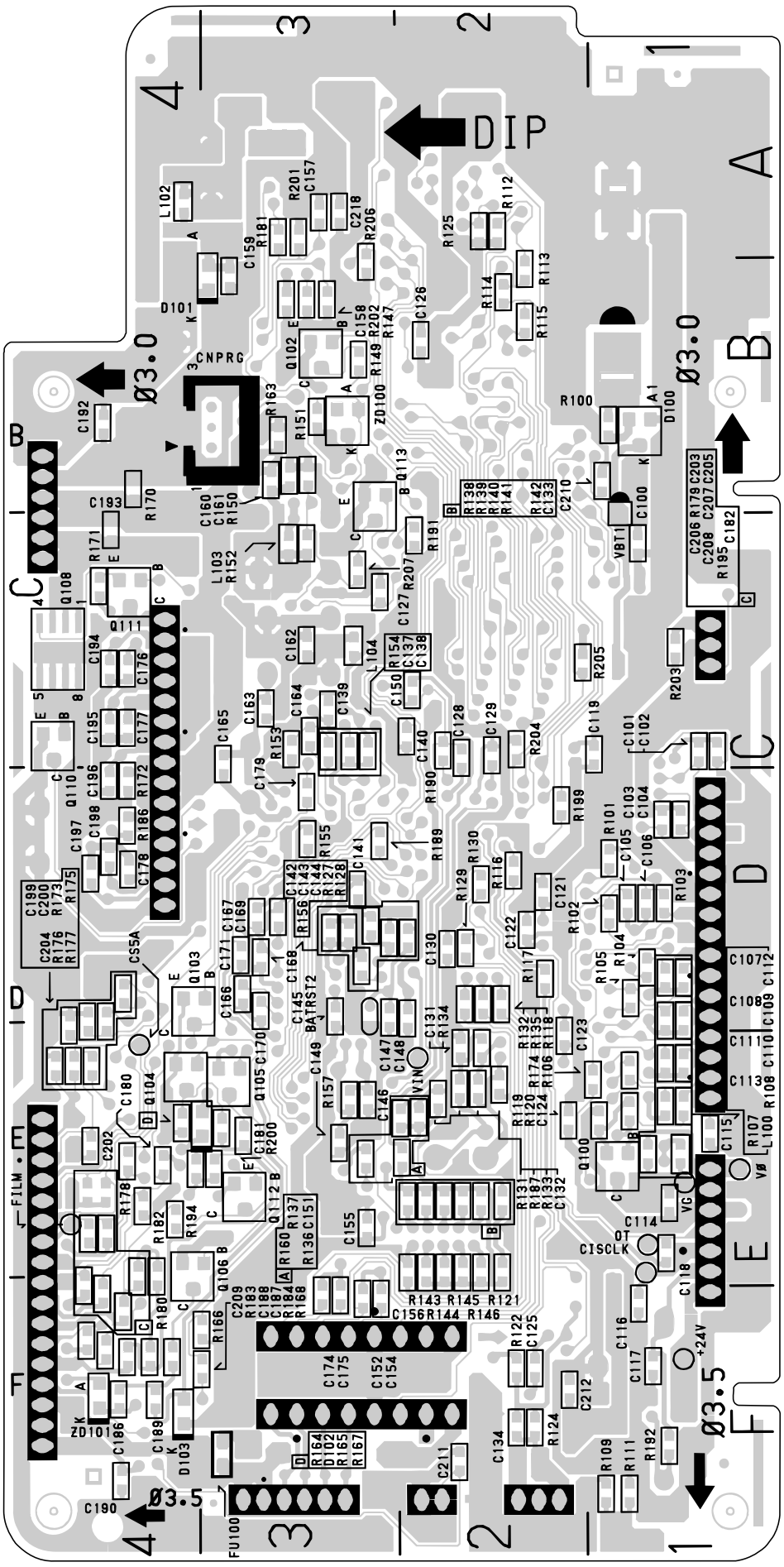

5/6
Video processing/Motor driver/Thermal block
IC6
ULN2001A
Q108
SI4431ADY
Q100
2SA1530A
Q102
Q110
Q111
RT1N141C
RT1P141C
ZD1
1N4748
ZD100
02CZ18-Y
FU100
KAB3202
CNCIS-1
CNCIS-2
CNCIS-3
CNCIS-6
CNCIS-7
CISVDD
VMT
+24VL
CNL IUA-3
CNMT-1
CNMT-2
CNMT-3
CNMT-4
CNMT-5
CNMT-6
TPAD
TPBD
TPAD
TPBD
THCHK- (5-3D)
LEDON- (5-3A)
VTH
CNTH-1
CNTH-15
THG
CNTH-6
CNTH-7
CNTH-8
THVDD
CNTH-9
THADI (1-2F)
THI
CNTH-4
TMICHK (3-1A)
+24V
+3.3V
VG
GLED
MG
DG
THG
TPA
TPB
TPA-
TPB-
THCHK
LEDON
(1-1F)
(1-1E)
(3-4A)
(3-2A)
(3-3A) VTHON
(5-5H) THCHK-
(3-2B) THLOOK
(5-5I) LEDON
(1-2F) VIN
VIN
VO
R120 5.1K
R107 10K
R119 0
R132 1K
R135 1K
R118 1K
R130 1K
R174 1K
R129 1K
R151 10k
R149 10k
R171 120K
R172 22K
R163 0.1u/50V
R152 20K
R150 470K
R207 100k
C124 0.01u/50V
C114 0.1u/50V
C1 220u/6.3V
C117 0.1u/50V
C160 1u/10V
C161 N.M.
C5 N.M.
C3 10u/50V
C176 N.M.
C174
C175
C152
C154
N.M.
L100 0
L103 0
R1 N.M.
R192 0
CIS Maker
R1
R192
C124
DYNA
N.M.
0Ω
0.01u/50V
ROHM
300Ω(2W)
N.M.
1000p/50V
NOTE:
⚠ This mark indicates a safety-critical part(s).

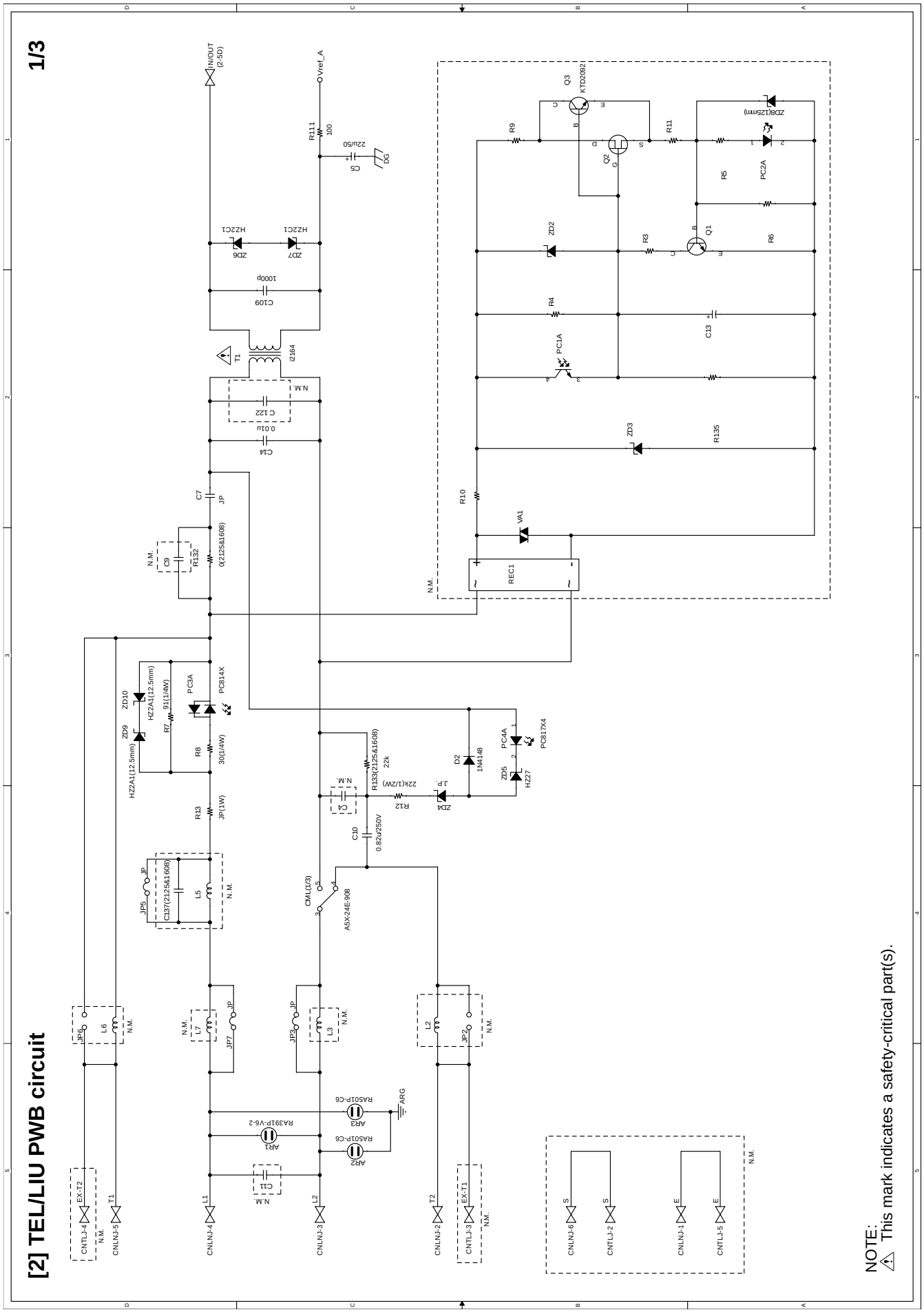

6/6
Analog signal block
IC5
LV4051
IC7
NJM2113
IC4
TC4S66
CNLIUA-14 TELOUT
CNLIUA-7 RXIN
CNLIUA-8 TXOUT
(3-5A) SIGMUTE
TELOUTi (3-2H)
SIGRX (3-3H)
CNLIUA-9 (3-4A)
CML
CNLIUA-5
TELIN
DTMFMUTE (3-5A)
RCVOL (3-5A)
SIGTX (3-3H)
(3-2H) SPOUT
(1-1F) BZOUT1
(3-3A) W-TONE
CNSP-1
CNSP-2
CNSP-3
SPMUTE (3-5A)
VOLA (3-1A)
VOLB (3-1A)
VOLC (3-1A)
VREG
+3.3V
D103 1SS355
D102 1SS355
ZD101
Q106
Q112
Q105 RT1N141C
Q104 RT1N141C
Q103 RT1N141C
N.M.
DG

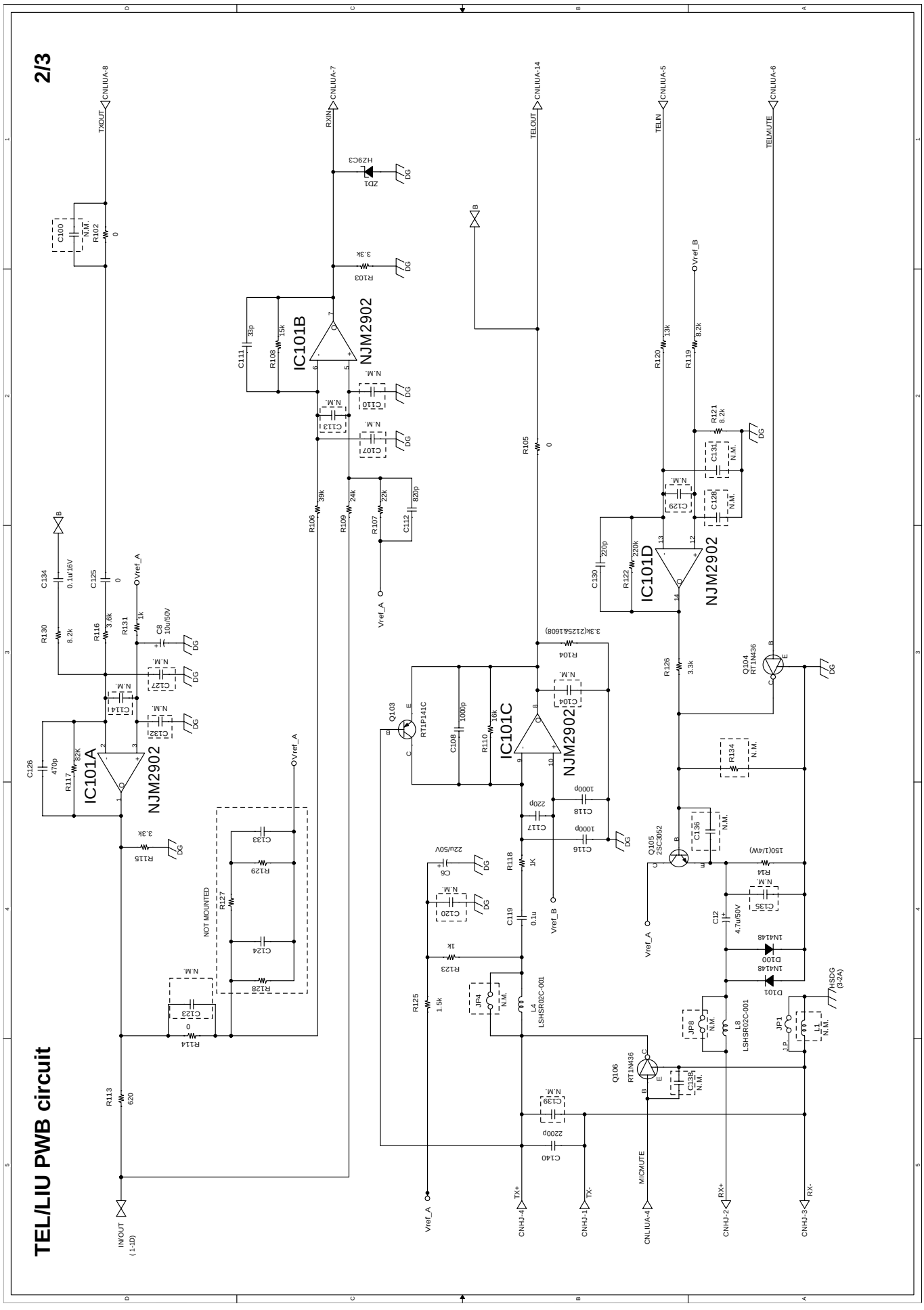
Control PWB parts layout (Top side)

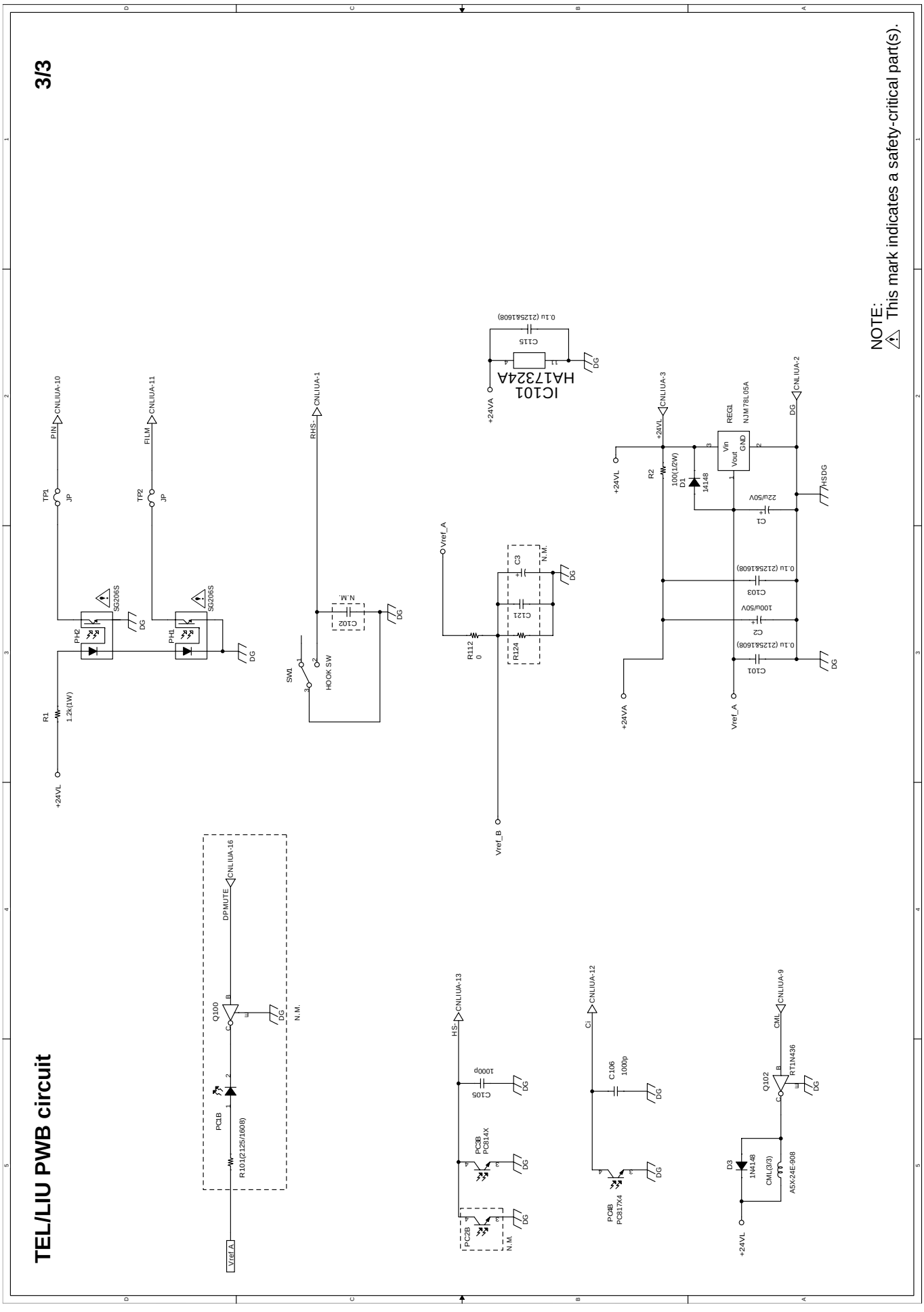


Control PWB parts layout (Bottom side)

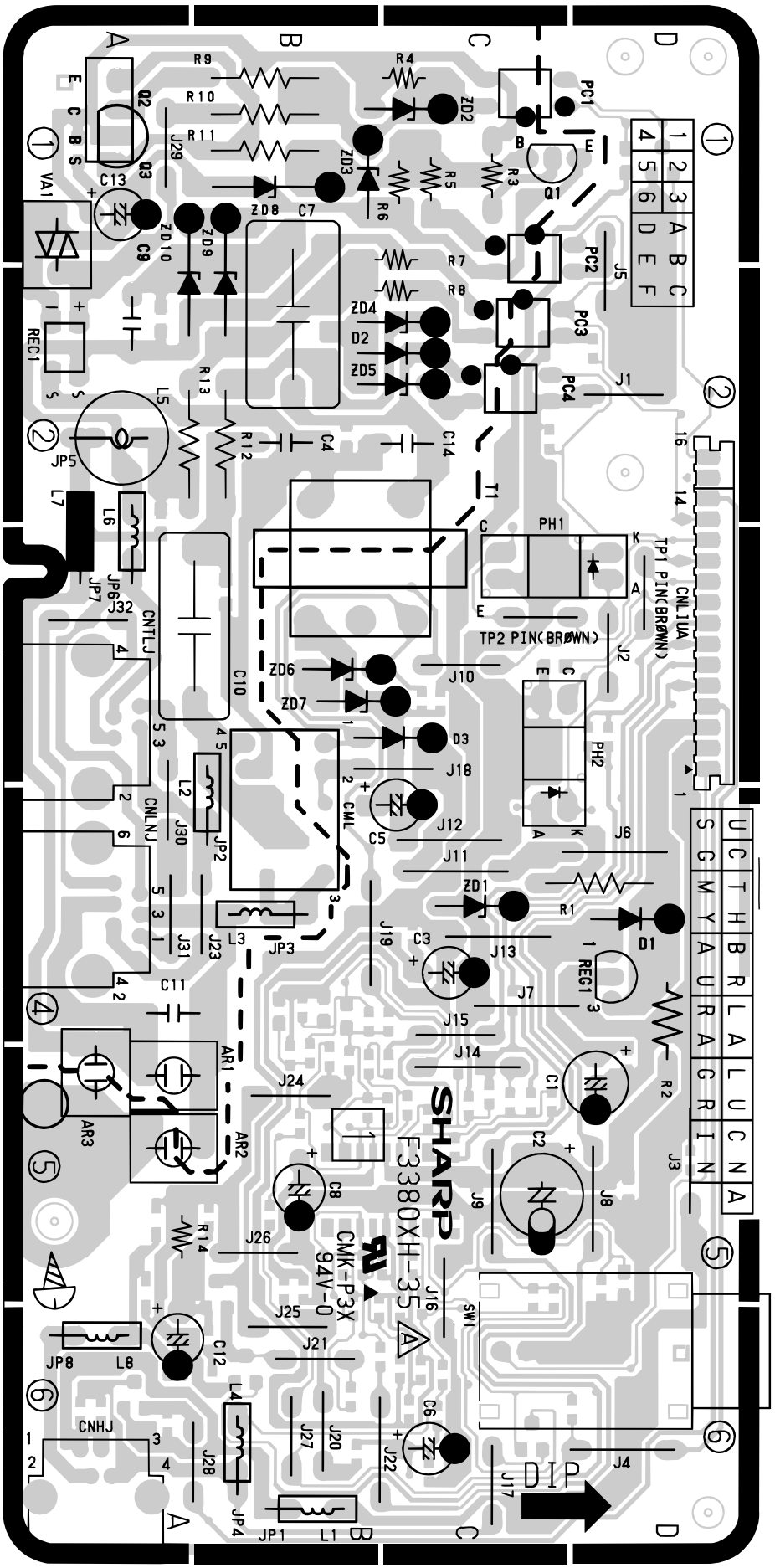



1/3
[2] TEL/LIU PWB circuit
NOTE:
⚠ This mark indicates a safety-critical part(s).

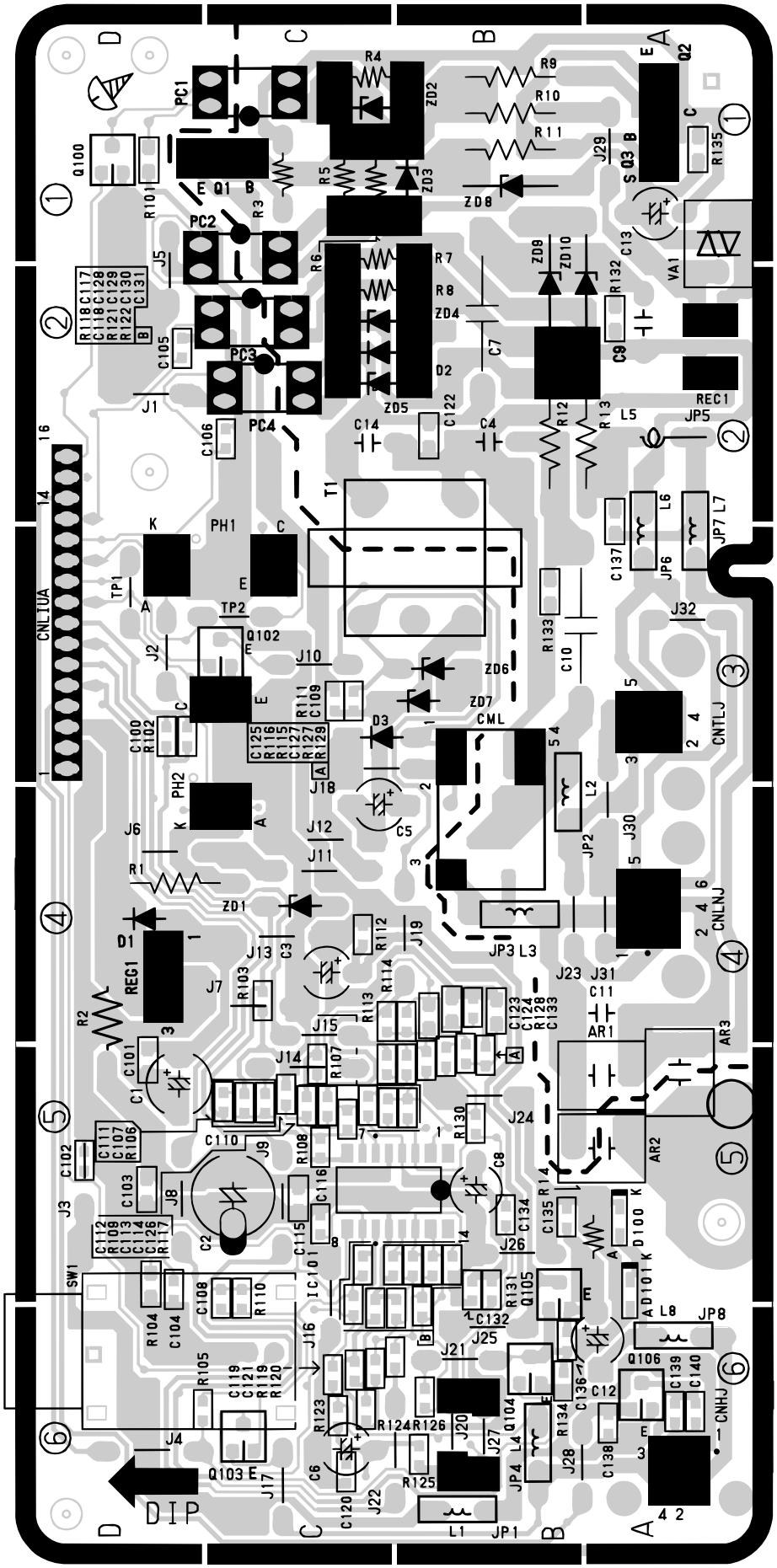

2/3
TEL/LIU PWB circuit
IC101A
NJM2902
IC101B
NJM2902
IC101C
NJM2902
IC101D
NJM2902
CNLIUA-8
CNLIUA-7
CNLIUA-14
CNLIUA-5
CNLIUA-6
TXOUT
RXIN
TELOUT
TELIN
TELMUTE
Vref_A
Vref_B
IN/OUT (1-1D)
CNHJ-4
CNHJ-1
CNHJ-2
CNHJ-3
CNLIUA-4
TX+
TX-
RX+
RX-
MICMUTE
NOT MOUNTED
N.M.
DG


3/3
TEL/LIU PWB circuit
NOTE:
⚠ This mark indicates a safety-critical part(s).
CNLIUA-10
PIN
TP1
JP
FILM
CNLIUA-11
TP2
JP
PH2
PH1
SG206S
DG
R1
1.2k(1W)
+24VL
CNLIUA-1
RHS
SW1
HOOK SW
N.M.
C102
IC101
HA17324A
0.1u (2125&1608)
C115
+24VA
Vref_A
Vref_B
C3
C121
R112
0
R124
CNLIUA-3
+24VL
R2
100(1/2W)
D1
1S4148
REGL
NJM78L05A
Vin
Vout
GND
CNLIUA-2
HSDG
C1
22u/50V
C103
100u/50V
C2
C101
Q100
DPMUTE
CNLIUA-16
PC1B
R101(2125/1608)
Vref_A
CNLIUA-13
HS
C105
1000p
PC3B
PC814X
PC2B
CNLIUA-12
CI
C106
1000p
PC4B
PC817X4
CNLIUA-9
CML
Q102
RT1N436
D3
1N4148
CML(3/3)
A5X-24E-908
+24VL

TEL/LIU PWB parts layout (Top side)

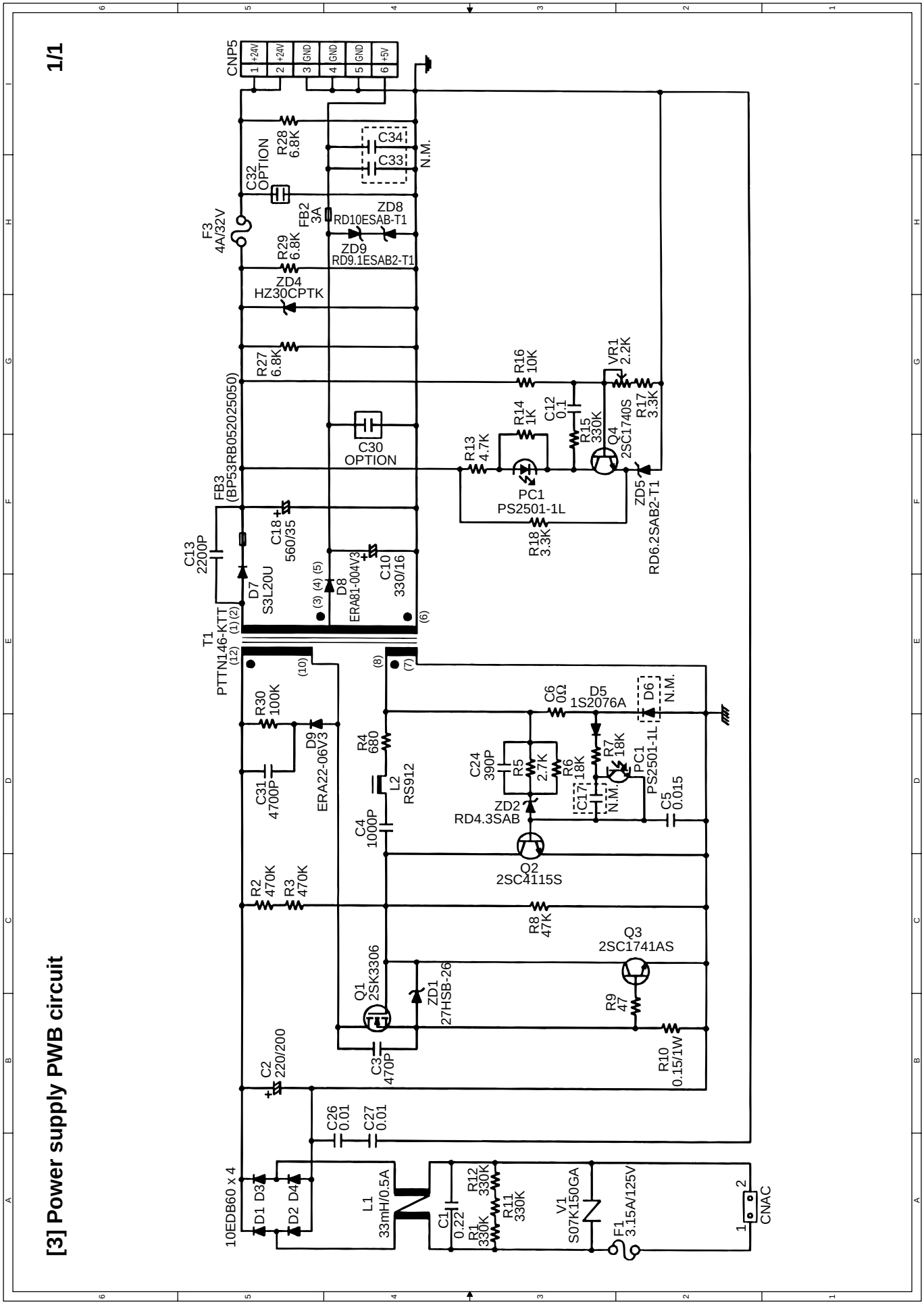


TEL/LIU PWB parts layout (Bottom side)

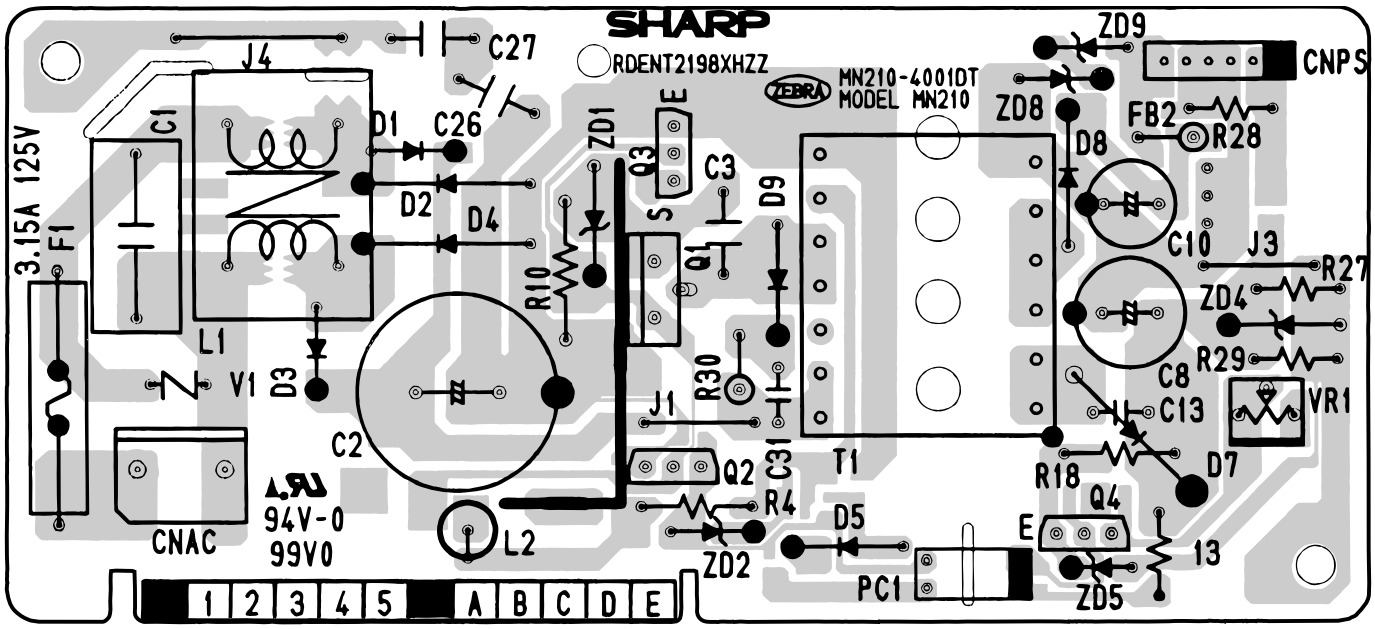


[3] Power supply PWB circuit

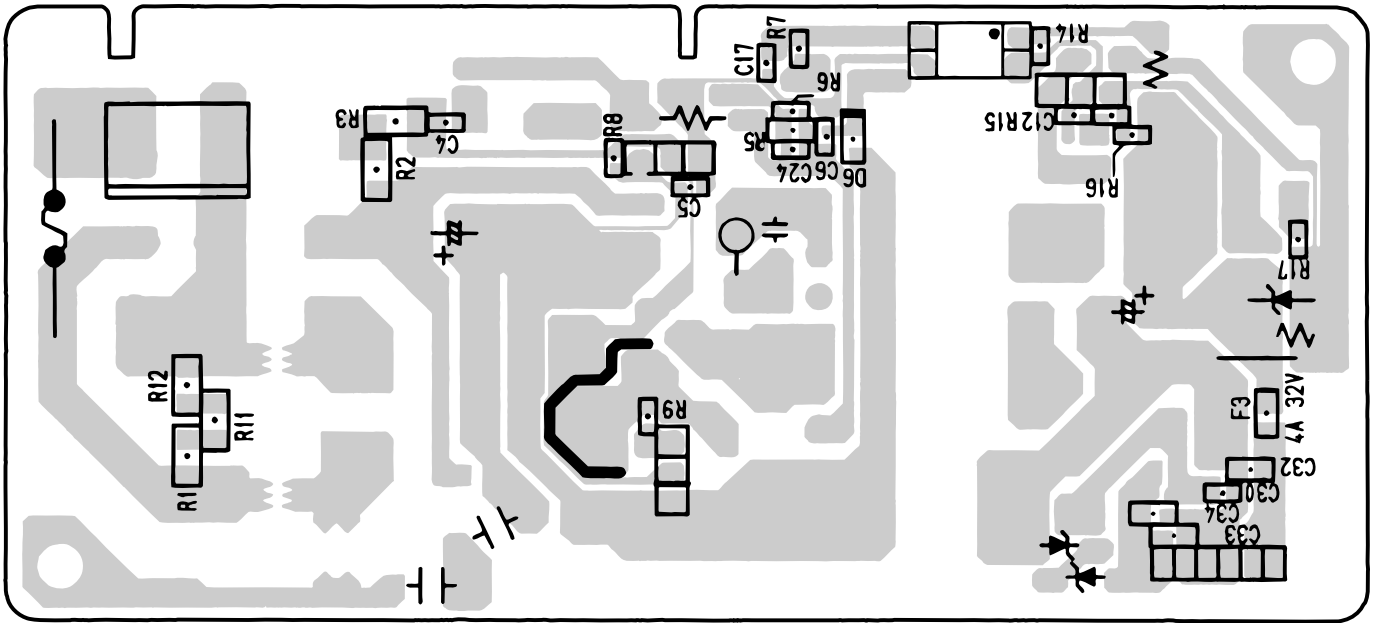
1/1



Power supply PWB parts layout (Top side)



Power supply PWB parts layout (Bottom side)



[4] Operation Panel PWB circuit

1/1

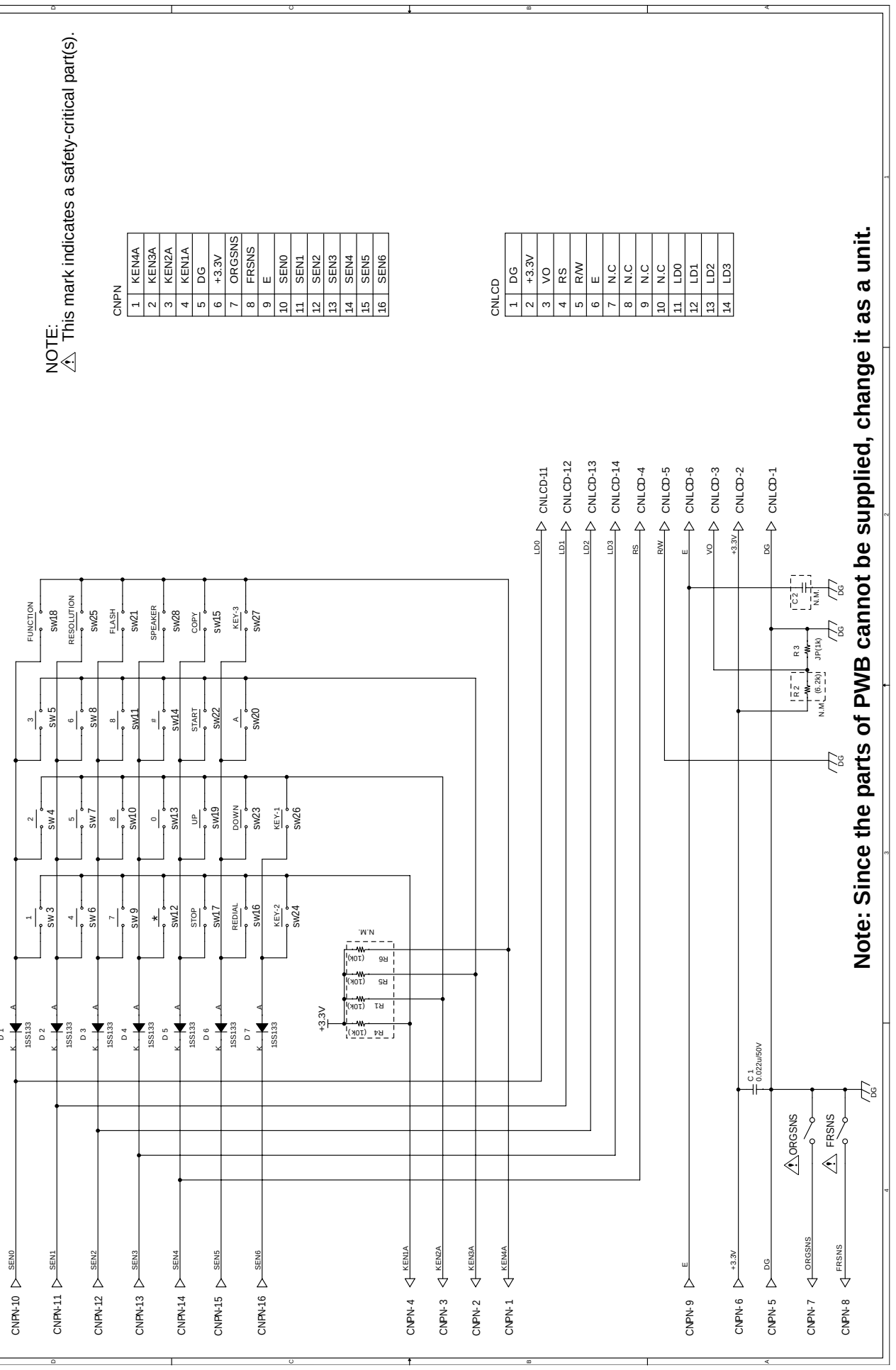
NOTE:
⚠ This mark indicates a safety-critical part(s).

CNPN

1	KEN4A
2	KEN3A
3	KEN2A
4	KEN1A
5	DG
6	+3.3V
7	ORGSNS
8	FRSNS
9	E
10	SEN0
11	SEN1
12	SEN2
13	SEN3
14	SEN4
15	SEN5
16	SEN6

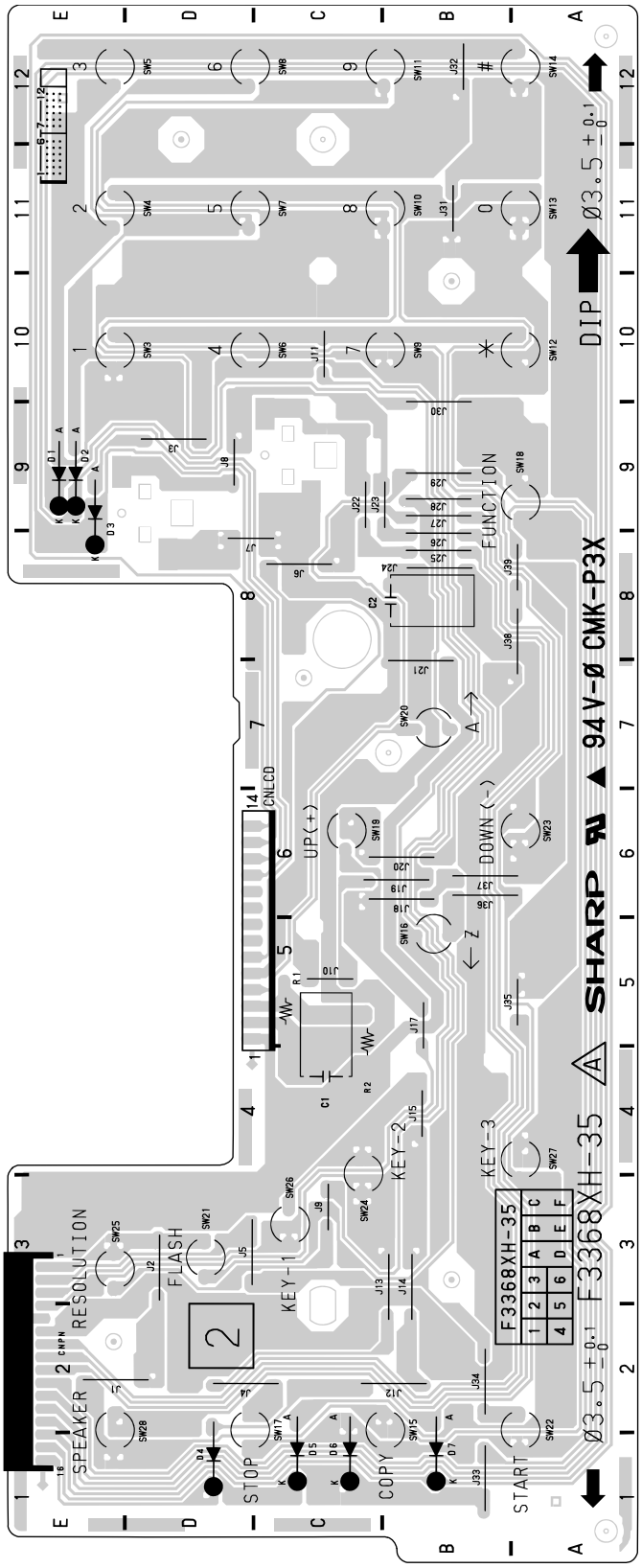
CNLCD

1	DG
2	+3.3V
3	VO
4	RS
5	R/W
6	E
7	N.C
8	N.C
9	N.C
10	N.C
11	LD0
12	LD1
13	LD2
14	LD3

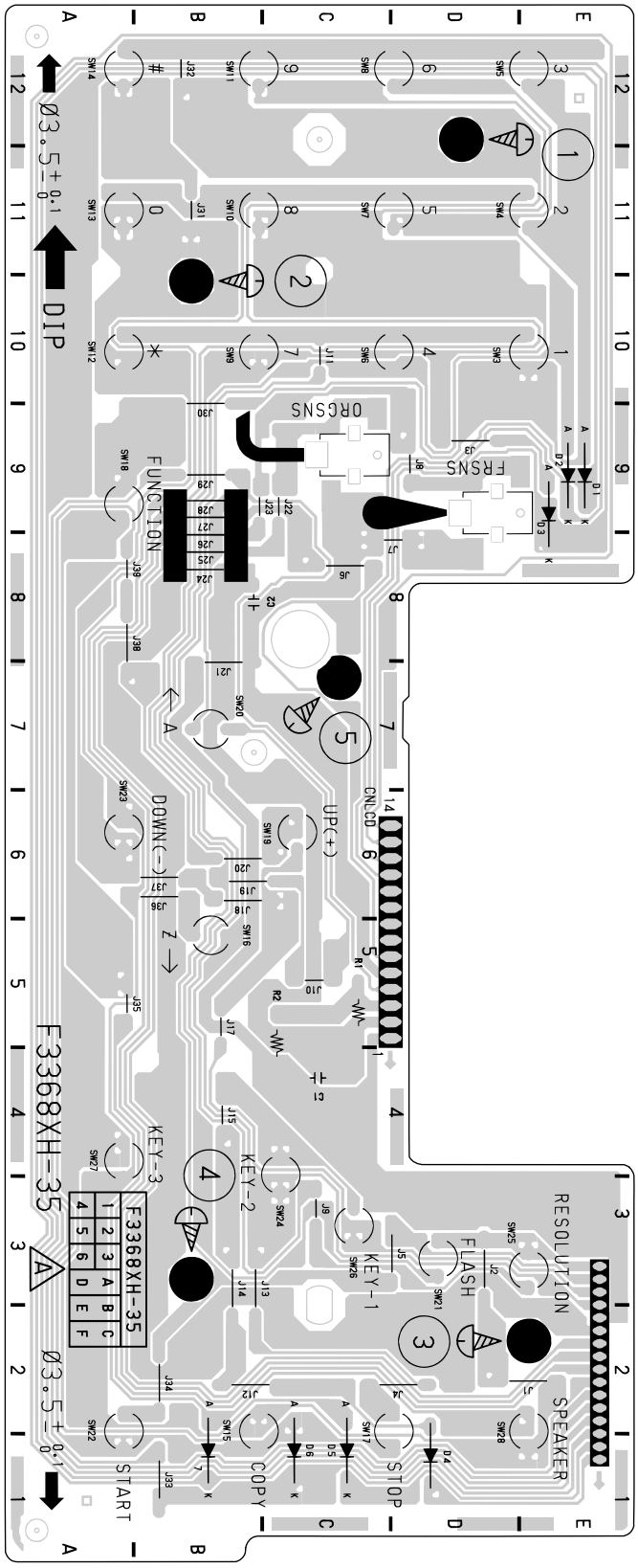


Note: Since the parts of PWB cannot be supplied, change it as a unit.

Operation panel PWB parts layout (Top side)



Operation panel PWB parts layout (Bottom side)



Note: Since the parts of PWB cannot be supplied, change it as a unit.

CHAPTER 7. OPERATION FLOWCHART

[1] Protocol

Refer to the service manual of UX-P100U.

[2] Power on sequence

Refer to the service manual of UX-P100U.

CHAPTER 8. OTHERS

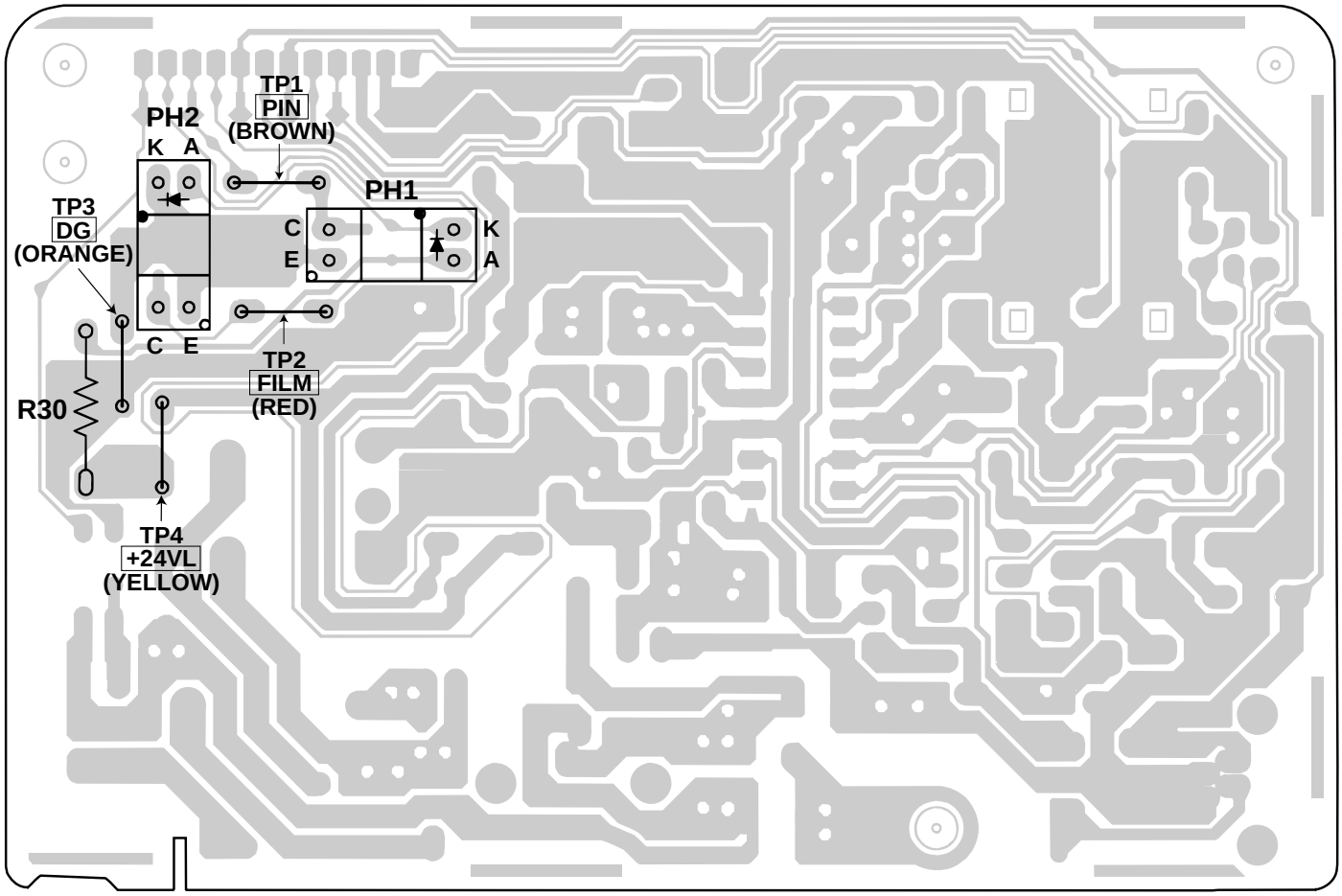
[1] Service tools

1. List

NO.	PARTS CODE	DESCRIPTION	Q'TY	PRICE RANK
1	CPWBF3201SCS1	Extension board unit (TEL/LIU PWB)	1	BA
2	PSHEZ3579SCZZ	Shading wave memory standard paper	1	AD

Extension board unit

TEL/LIU PWB



NO.	PARTS CODE	DESCRIPTION	Q'TY	PRICE RANK
1	QCNWG471BSCZZ	SPEAKER RELAY CABLE	1	
2	QCNWG206BSCZZ	PANEL RELAY CABLE	1	AT
3	QCNWG202BSCZZ	CIS RELAY CABLE	1	AN
4	QCNWG205BSCZZ	HEAD RELAY CABLE	1	AS
5	QCNWG204BSCZZ	CAM SWITCH RELAY CABLE	1	AG
6	QCNWG242BSCZZ	MOTOR RELAY CABLE	1	AM
7	QCNWG201BSCZZ	SENSOR RELAY CABLE	1	BB
8	VRS-RE3AA122J	RESISTOR (1W 1.2KΩ ±5%)[R30]	1	AC
9	VHPSG206S//-1	PHOTO TRANSISTOR [PH1]	1	AG
10	VHPSG206S//-1	PHOTO TRANSISTOR [PH2]	1	AG

2. Description

Refer to the service manual of UX-P100U.

3. Shading paper

Refer to the service manual of UX-P100U.

[2] IC signal name

Refer to the service manual of UX-P100U.

[3] Changing the record paper size

Refer to the service manual of UX-P100U.

SHARP PARTS GUIDE

MODEL UX-A260

MODEL	SELECTION CODE	DESTINATION
UX-A260	U	U.S.A.

CONTENTS

1 Cabinet, etc.

2 Top cover/Sub frame

3 Upper cabinet/Document guide upper

4 Drive unit

5 Packing material & Accessories

6 Control PWB unit

7 TEL/LIU PWB unit

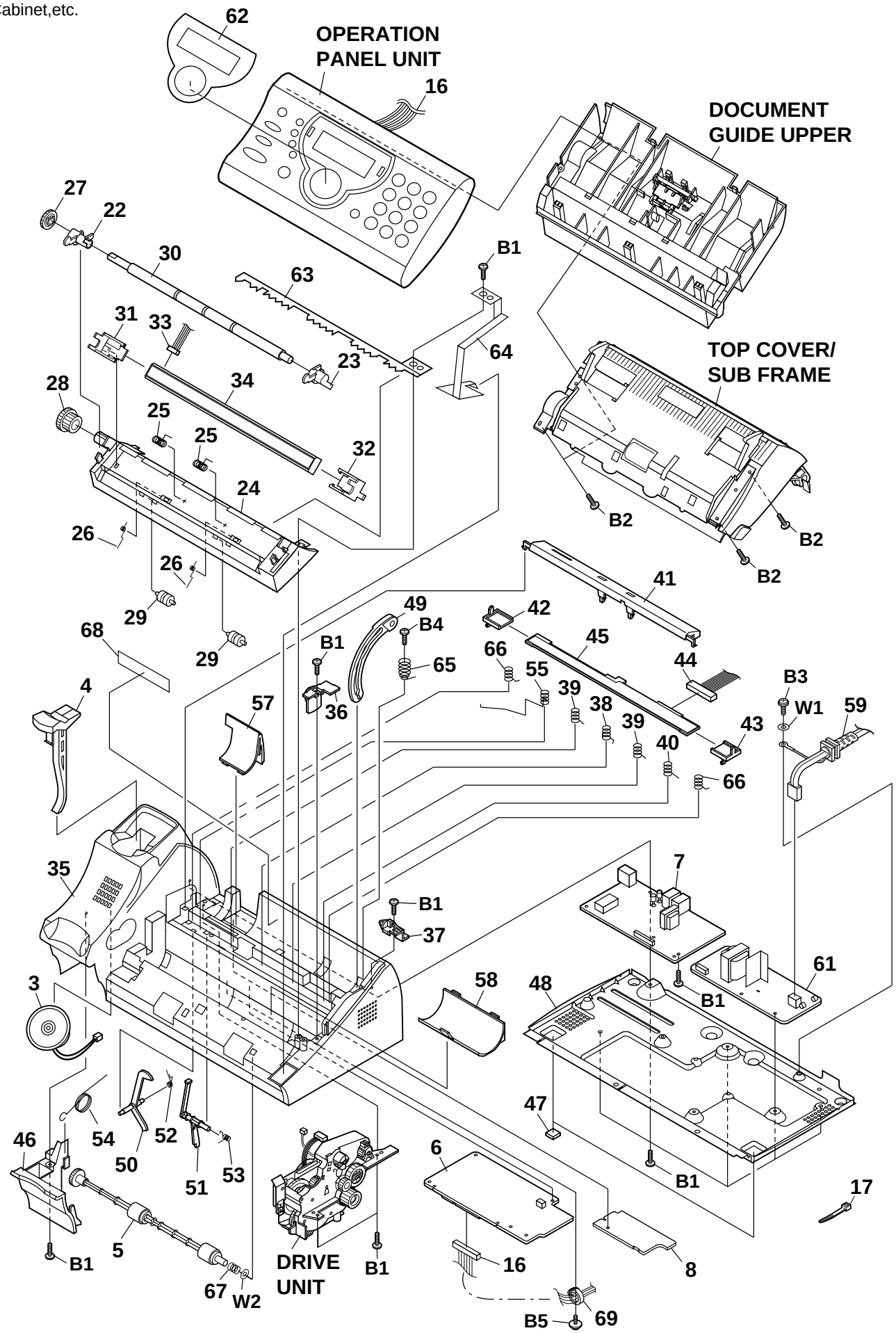
8 Power supply PWB unit

9 Operation panel PWB unit

■ Index

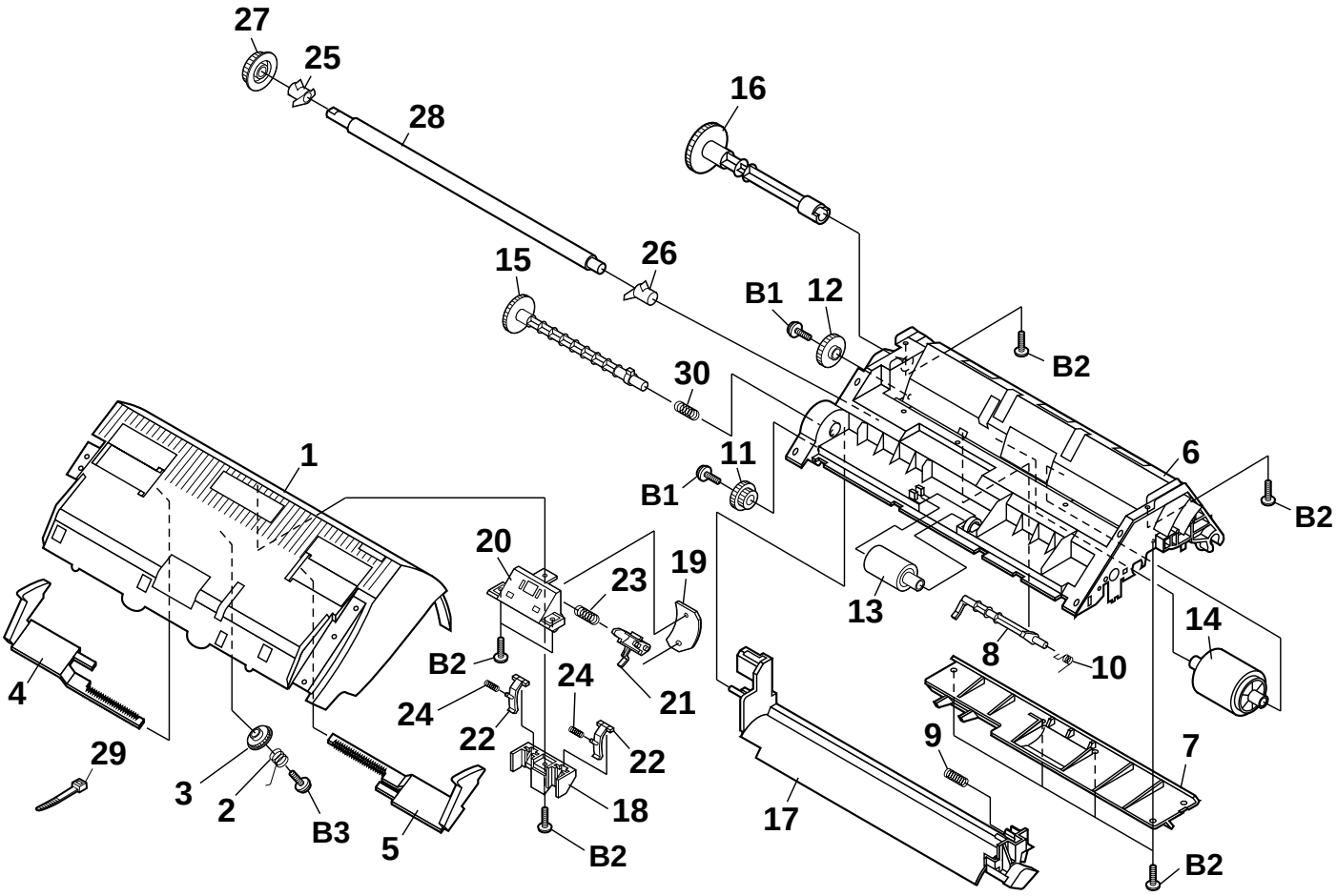
Because parts marked with "⚠" are indispensable for the machine safety maintenance and operation, it must be replaced with the parts specific to the product specification.

[1] Cabinet,etc.



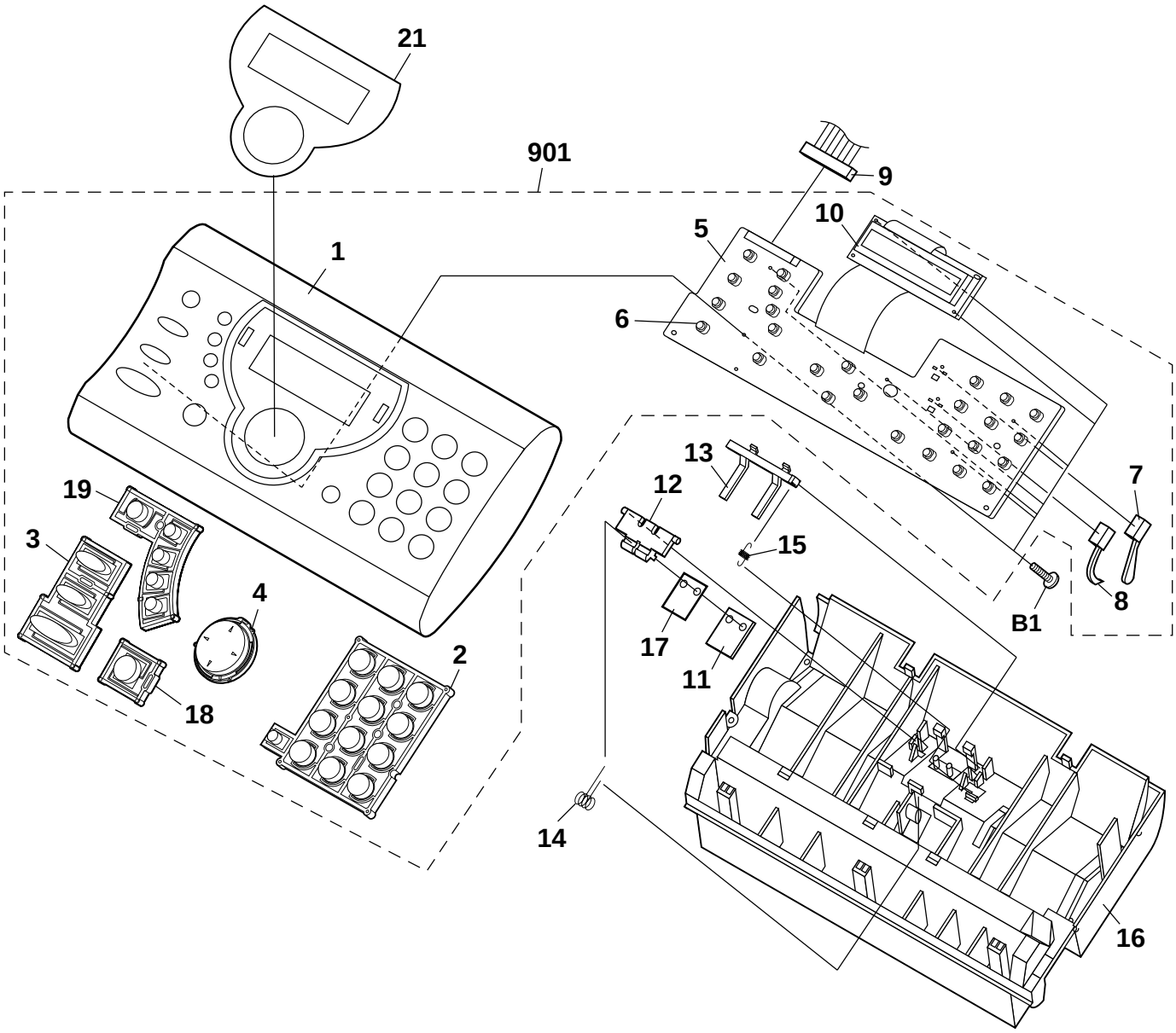
NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[1] Cabinet,etc.					
3	CCNWN395BXH01	AP	N	C	Speaker ass'y
4	CLEVP2358XH01	AD		C	Hook switch lever ass'y
5	CROLR2481XH01	AQ		C	PO roller ass'y
6	DCEKC481SXHZZ	BY	N	E	Control PWB unit(Within ROM)
7	DCEKL498CXH01	BF	N	E	TEL/LIU PWB unit
8	QPWBF3368XHZ2	AQ	N	E	Wire holder(PWB only)
16	QCNWN425BXHZZ	AR	N	C	Panel cable
17	LBNDJ2006XHZZ	AA		C	Band(100mm)
22	LBSHP2140XHZA	AC		C	Back bearing,left
23	LBSHP2143XHZZ	AC		C	Back bearing,right
24	LFRM-2225XHVA	AP	N	C	Scanner frame
25	MSPRC3295XHZZ	AB		C	CIS spring
26	MSPRD3379XHZZ	AD		C	PO pinch roller spring
27	NGERH2569XHZZ	AC		C	Back gear
28	NGERH2570XHZZ	AD		C	Reduction gear,21/37Z
29	NROLP2332XHZZ	AD		C	PO pinch roller
30	NROLR2482XHZZ	AR		C	Back roller
31	PGIDM2617XHZZ	AD		C	CIS guide,left
32	PGIDM2618XHZZ	AD		C	CIS guide,right
33	QCNWN419BXHZZ	AL	N	C	CIS cable
34	RUNTZ2124XHZZ	BM		B	CIS unit
35	GCABB2393XHSH	AZ		D	Lower cabinet
36	LHLDZ2227XHZZ	AD		C	Ink ribbon spool 1
37	LHLDZ2228XHZZ	AD		C	Ink ribbon spool 2
38	MSPRC3287XHZZ	AB		C	Head spring A
39	MSPRC3288XHZZ	AB		C	Head spring B
40	MSPRC3340XHZA	AD		C	Head spring C
41	PCOVP2130XHZZ	AE		C	Head cover
42	PGIDM2615XHZZ	AD		C	Head guide,left
43	PGIDM2616XHZZ	AD		C	Head guide,right
44	QCNWN486AXHZZ	AM		C	Head cable
45	RHEDZ2065XHZZ	BP		B	Thermal head
46	GCOVA2447XHVA	AL	N	D	Front cover
47	GLEGG2078XHZZ	AD		C	Rubber leg
48	LPLTM3178XHZZ	AF		C	Bottom plate
49	LPLTP3177XHZZ	AD		C	Stopper plate
50	MLEVP2357XHZZ	AD		C	Film sensor lever
51	MLEVP2356XHZA	AD	N	C	P-IN sensor lever,lower
52	MSPRD3286XHZA	AB		C	Film sensor lever spring
53	MSPRD3285XHZZ	AB		C	P-IN sensor lever spring,lower
54	MSPRD3291XHZZ	AD		C	Speaker hold spring
55	MSPRD3292XHZA	AB		C	Head earth spring
57	PCOVP2131XHVA	AG	N	C	Panel cable cover
58	PCOVP2132XHZZ	AD		C	Control PWB cover
⚠ 59	QACCD2072XHZZ	AP	N	B	AC cord ass'y
⚠ 61	RDENT2198XHZZ	BG	N	E	Power supply PWB unit
62	HPNLH2420XHSM	AL	N	D	Decoration panel
63	PBRS-2055XHZZ	AN		C	Static brush
64	PSHEZ3687XHZZ	AD		C	Earth sheet
65	MSPRD3341XHZZ	AD		C	Up spring
66	MSPRC3346XHZZ	AD		C	Head spring D
67	MSPRC3357XHZZ	AD		C	PO roller spring
68	TLABH498FXHZZ	AH	N	D	Imaging film set label
⚠ 69	RCORF2125XHZZ	AE		B	Core
B1	XEBSD30P10000	AA		C	Screw(3x10)
B2	XEBSD30P12000	AA		C	Screw(3x12)
B3	LX-BZ2282XHZZ	AB		C	Screw
B4	XEPSD30P08000	AA		C	Screw(3x8)
B5	LX-BZ2205XHZZ	AC		C	Screw
W1	XWHSN40-08100	AA		C	Washer
W2	LX-WZ2290XHZZ	AE		C	Washer

[2] Top cover/Sub frame



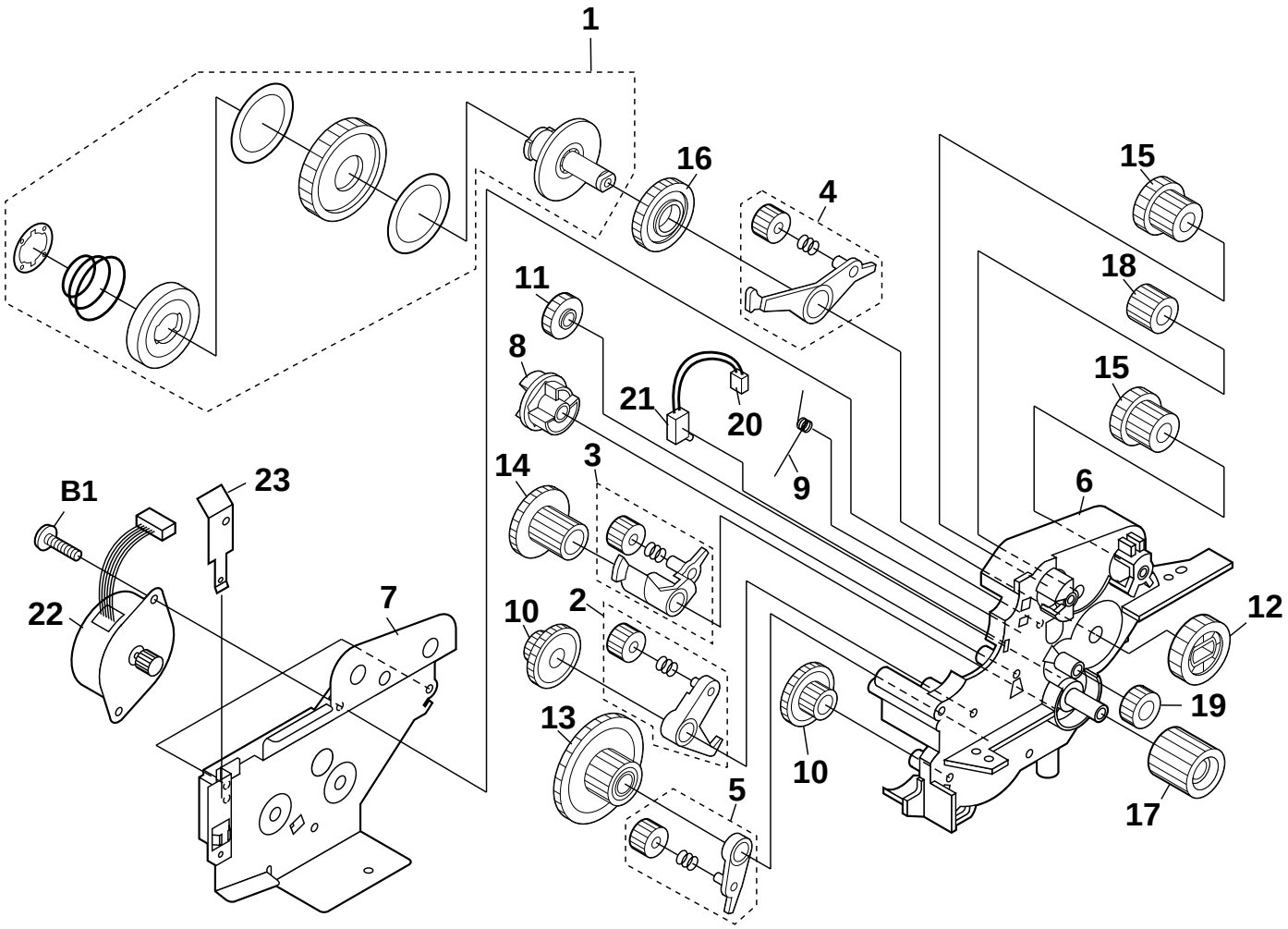
NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[2] Top cover/Sub frame					
1	GCOVA2448XHVA	AX	N	C	Top cover
2	MSPRC3301XHZZ	AB		C	Hopper spring
3	NGERP2318XHZZ	AD		C	Pinion gear
4	PGIDM2619XHVA	AG		C	Hopper guide,left
5	PGIDM2620XHVA	AG		C	Hopper guide,right
6	LFRM-2227XHZZ	AQ		C	Sub frame
7	LFRM-2232XHZZ	AT		C	Sub frame plate
8	MLEVP2363XHZZ	AD		C	P-IN sensor lever,upper
9	MSPRC3305XHZZ	AB		C	Release lever spring
10	MSPRD3302XHZZ	AB		C	P-IN sensor lever spring,upper
11	NGERH2580XHZZ	AC		C	Reduction gear,15/22Z
12	NGERH2581XHZZ	AC		C	Idler gear,25Z
13	NROLR2483XHZZ	AL		C	Paper feed roller
14	NROLR2504XHZZ	AL	N	C	PU roller
15	NSFTP2357XHZZ	AG		C	Paper feed roller shaft
16	NSFTP2374XHZZ	AG	N	C	PU roller shaft
17	PGIDM2621XHSA	AF		C	Release lever
18	LHLDZ2224XHZZ	AL		C	RP feed plate holder
19	LPLTG3181XHZZ	AD		C	RP separate rubber
20	LPLTP3179XHZZ	AD		C	RP separate base
21	LPLTP3180XHZZ	AH		C	RP separate plate
22	LPLTP3182XHZZ	AH		C	RP feed plate
23	MSPRC3299XHZZ	AB		C	RP separate spring
24	MSPRC3300XHZZ	AB		C	RP feed spring
25	LBSHP2148XHZA	AE	N	C	Platen bearing,left
26	LBSHP2149XHZA	AE	N	C	Platen bearing,right
27	NGERH2579XHZZ	AD		C	Platen gear
28	NROLR2485XHZZ	AQ		C	Platen roller
29	LBNDJ2006XHZZ	AA		C	Band
30	MSPRC3335XHZZ	AD		C	Paper feed roller spring
B1	LX-BZ2234XHZZ	AD		C	Screw
B2	XEBSD30P10000	AA		C	Screw(3x10)
B3	LX-BZ2222XHZZ	AC		C	Screw

[3] Upper cabinet/Document guide upper



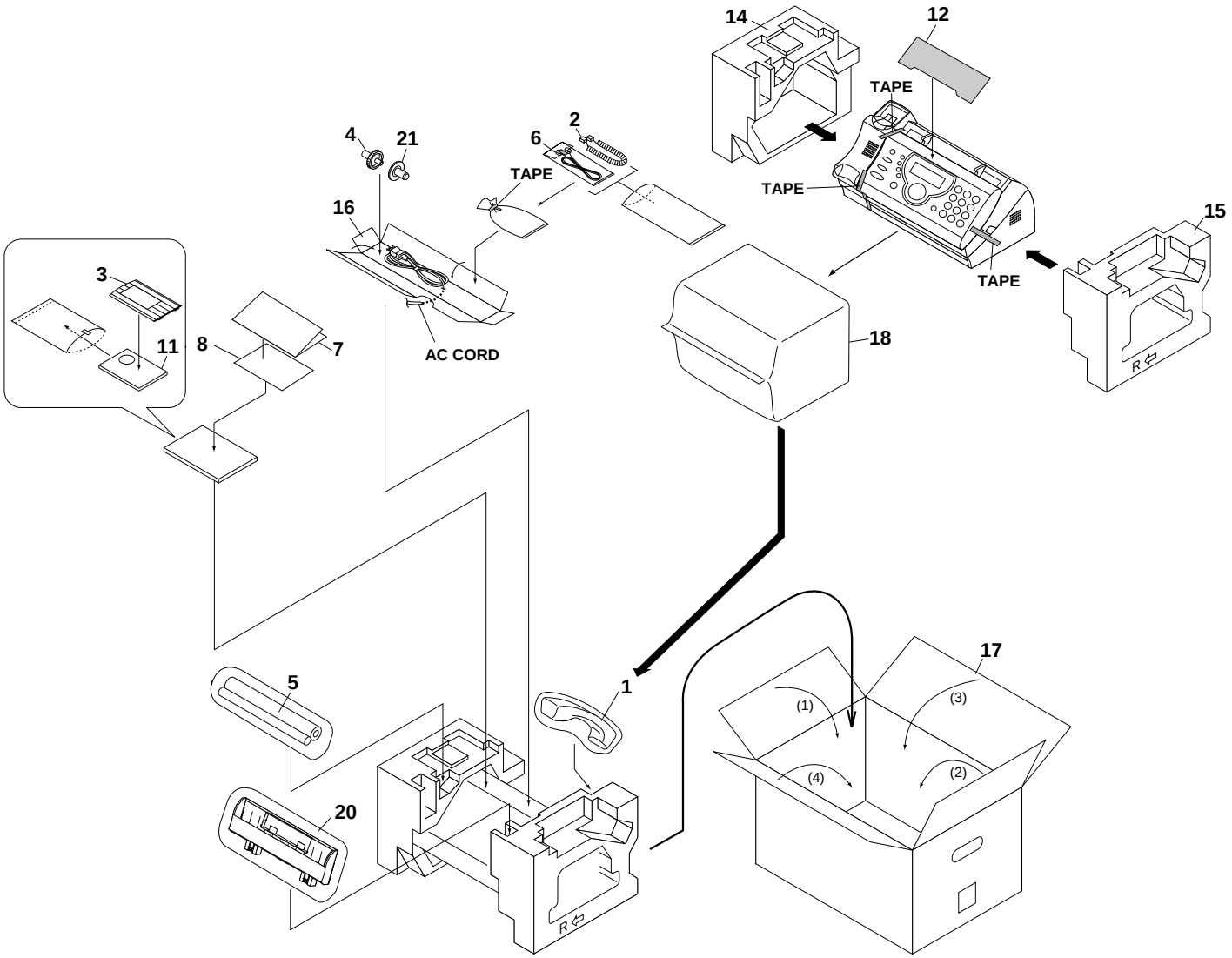
NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[3] Upper cabinet/Document guide upper					
1	GCASP2173XHSB	BA	N	D	Panel case
2	JBTN-2357XHSB	AK	N	C	12 key
3	JBTN-2359XHSF	AQ	N	C	Start key
4	JBTN-2358XHSB	AH	N	C	Function key
5	DCEKP478CXH02	BG	N	E	Operation panel PWB unit
6	QSW-Q2331XHZZ	AE	N	C	Tact switch [SW]
⚠ 7	QSW-M2246AXZZ	AH		C	FRSNS sensor
⚠ 8	QSW-M2294XHZZ	AE		C	ORGSNS sensor
9	QCNWN425BXHZZ	AR	N	C	Panel cable
10	RUNTZ2127XH01	BC	N	E	LCD unit
11	LPLTG2911XHZZ	AE		C	Separate rubber
12	LPLTP3175XHZZ	AD		C	Separate plate
13	LPLTP3176XHZZ	AD		C	Feed plate
14	MSPRD3293XHZZ	AB		C	Separate spring
15	MSPRT3294XHZZ	AB		C	Feed spring
16	PGIDM2614XHSA	AL		C	Document guide upper
17	PSHEP3660XHZZ	AE		C	Separate rubber sheet
18	JBTN-2360XHSC	AH	N	C	Speed key
19	JBTN-2361XHSD	AM	N	C	Function 2 key
21	HPNLH2420XHSM	AL	N	D	Decoration panel
B1	XEBSD20P06000	AA		C	Screw(2x6)
	(Unit)				
901	DCEKP480CXH03	BG	N	E	Operation panel unit

[4] Drive unit



NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[4] Drive unit					
1	CGERH2314XH05	AS		C	Slip gear ass'y
2	CLEVP2359XH01	AD		C	Planet gear lever ass'y A
3	CLEVP2360XH01	AD		C	Planet gear lever ass'y B
4	CLEVP2361XH01	AD		C	Planet gear lever ass'y C
5	CLEVP2362XH01	AD		C	Planet gear lever ass'y D
6	LFRM-2226XHZZ	AQ		C	Drive unit frame
7	LPLTM3190XHZZ	AG		C	Motor plate
8	MCAMP2028XHZZ	AE		C	Cam
9	MSPRD3298XHZZ	AE		C	Cam hold spring
10	NGERH2380XHZZ	AC		C	Reduction gear,17/36Z
11	NGERH2409XHZZ	AB		C	Idler gear,23Z
12	NGERH2571XHZZ	AD		C	Slip gear
13	NGERH2572XHZZ	AD		C	Reduction gear,25/63Z
14	NGERH2573XHZZ	AD		C	Reduction gear,20/40Z
15	NGERH2574XHZZ	AD		C	Reduction gear,15/30Z
16	NGERH2575XHZZ	AD		C	Idler gear,40Z
17	NGERH2576XHZZ	AD		C	Idler gear,21Z
18	NGERH2577XHZZ	AD		C	Idler gear,20Z
19	NGERH2582XHZZ	AC		C	Idler gear,15Z
20	QCNWN483AXHZZ	AD		C	Cam switch cable
21	QSW-F2224SCZZ	AE		C	Cam switch
22	RMOTS2175XHZZ	AX		B	Motor
23	MSPRP3297XHZZ	AD		C	Earth spring
B1	XEBSD30P08000	AA		C	Screw(3x8)

[5] Packing material & Accessories



	NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
	[5] Packing material & Accessories					
	1	DUNTK497CXHFW	AY	N	E	Handset
⚠	2	QCNWG209BXHOW	AH		C	Handset cord
	3	CPLTP3222XHR2	AQ	N	C	Paper tray extension
	4	NGERH2568XHZZ	AB		C	Imaging film gear
	5	PRBNN2038SC10	AV	N	S	Imaging film(Initial starter film 10m)
⚠	6	QCNWG208BXHZZ	AF		C	Telephone line cord
	7	TCADZ3598XHZZ	AH	N	D	Setup guide
	8	TCADZ2891XHZZ	AF	N	D	Registration card
	11	TINSE4356XHTZ	AY	N	D	Operation manual
	12	TCADZ3599XHZZ	AP	N	D	Pop label
	14	SPAKA465CXHZZ	AF		D	Packing add.,left
	15	SPAKA466CXHZZ	AF		D	Packing add.,right
	16	SPAKA467CXHZZ	AD		D	Packing add.,accessories
	17	CPAKC222FXH01	AT	N	D	Packing case with label
	18	SPAKP329DXHZZ	AF		D	Vinyl cover
	20	CPLTP3183XHRF	AV	N	C	Paper tray ass'y
	21	CGERH2566XH01	AG		C	Imaging film gear ass'y

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
[6] Control PWB unit						
1	UBATL2049SCZZ	AF		B	Battery(CR2032T23)	[BAT1]
2	VCEAGA0JW227M	AD		C	Capacitor(6.3WV 220μF)	[C1]
3	VCEAGA1EW476M	AA		C	Capacitor(25WV 47μF)	[C2]
4	VCEAGA1HW106M	AA		C	Capacitor(50WV 10μF)	[C3]
5	VCEAGA1HW106M	AA		C	Capacitor(50WV 10μF)	[C4]
6	VCEAGA1HW106M	AA		C	Capacitor(50WV 10μF)	[C6]
7	VCEAGA1HW106M	AA		C	Capacitor(50WV 10μF)	[C7]
8	VCEAGA0JW227M	AD		C	Capacitor(6.3WV 220μF)	[C8]
9	VCEAGA1EW476M	AA		C	Capacitor(25WV 47μF)	[C9]
10	VCEAGA1HW226M	AB		C	Capacitor(50WV 22μF)	[C10]
11	VCKYCY1HF104Z	AA		C	Capacitor(50WV 0.1μF)	[C100]
12	VCKYCY1HB102K	AA		C	Capacitor(50WV 1000PF)	[C105]
13	VCKYCY1HB102K	AA		C	Capacitor(50WV 1000PF)	[C106]
14	VCCCCY1HH101J	AA		C	Capacitor(50WV 100PF)	[C108]
15	VCCCCY1HH101J	AA		C	Capacitor(50WV 100PF)	[C109]
16	VCCCCY1HH101J	AA		C	Capacitor(50WV 100PF)	[C110]
17	VCCCCY1HH101J	AA		C	Capacitor(50WV 100PF)	[C111]
18	VCCCCY1HH101J	AA		C	Capacitor(50WV 100PF)	[C112]
19	VCCCCY1HH101J	AA		C	Capacitor(50WV 100PF)	[C113]
20	VCKYCY1HF104Z	AA		C	Capacitor(50WV 0.1μF)	[C114]
21	VCCCCY1HH101J	AA		C	Capacitor(50WV 100PF)	[C115]
22	VCKYCY1HF104Z	AA		C	Capacitor(50WV 0.1μF)	[C117]
23	VCKYCY1HF104Z	AA		C	Capacitor(50WV 0.1μF)	[C119]
24	VCKYCY1HF104Z	AA		C	Capacitor(50WV 0.1μF)	[C121]
25	VCKYCY1HF104Z	AA		C	Capacitor(50WV 0.1μF)	[C122]
26	VCKYCY1HF104Z	AA		C	Capacitor(50WV 0.1μF)	[C123]
27	VCKYCY1HB103K	AA		C	Capacitor(50WV 0.01μF)	[C124]
28	VCKYCY1AF105Z	AC		C	Capacitor(10WV 1μF)	[C125]
29	VCKYCY1HF104Z	AA		C	Capacitor(50WV 0.1μF)	[C126]
30	VCKYCY1HF104Z	AA		C	Capacitor(50WV 0.1μF)	[C129]
31	VCKYCY1HF104Z	AA		C	Capacitor(50WV 0.1μF)	[C130]
32	VCCCCY1HH150J	AB		C	Capacitor(50WV 15PF)	[C131]
33	VCCCCY1HH330J	AA		C	Capacitor(50WV 33PF)	[C132]
34	VCKYCY1HB103K	AA		C	Capacitor(50WV 0.01μF)	[C133]
35	VCCCCY1HH221J	AA		C	Capacitor(50WV 220PF)	[C134]
36	VCKYCY1HF104Z	AA		C	Capacitor(50WV 0.1μF)	[C138]
37	VCKYCY1HF104Z	AA		C	Capacitor(50WV 0.1μF)	[C139]
38	VCKYCY1AF105Z	AC		C	Capacitor(10WV 1μF)	[C140]
39	VCKYCY1HF104Z	AA		C	Capacitor(50WV 0.1μF)	[C141]
40	VCKYCY1AF105Z	AC		C	Capacitor(10WV 1μF)	[C142]
41	VCKYCY1AF105Z	AC		C	Capacitor(10WV 1μF)	[C143]
42	VCKYCY1AF105Z	AC		C	Capacitor(10WV 1μF)	[C144]
43	VCKYCY1AF105Z	AC		C	Capacitor(10WV 1μF)	[C145]
44	VCCCCY1HH200J	AA		C	Capacitor(50WV 20PF)	[C146]
45	VCKYCY1AF105Z	AC		C	Capacitor(10WV 1μF)	[C147]
46	VCKYCY1AF105Z	AC		C	Capacitor(10WV 1μF)	[C148]
47	VCCCCY1HH200J	AA		C	Capacitor(50WV 20PF)	[C149]
48	VCKYCY1AF105Z	AC		C	Capacitor(10WV 1μF)	[C150]
49	VCKYCY1HB472K	AA		C	Capacitor(50WV 4700PF)	[C151]
50	VCKYCY1HF104Z	AA		C	Capacitor(50WV 0.1μF)	[C156]
51	VCKYCY1AF105Z	AC		C	Capacitor(10WV 1μF)	[C159]
52	VCKYCY1AF105Z	AC		C	Capacitor(10WV 1μF)	[C160]
53	VCKYCY1HF104Z	AA		C	Capacitor(50WV 0.1μF)	[C162]
54	VCKYCY1HF104Z	AA		C	Capacitor(50WV 0.1μF)	[C163]
55	VCKYCY1CB104K	AB		C	Capacitor(16WV 0.1μF)	[C164]
56	VCKYCY1HF104Z	AA		C	Capacitor(50WV 0.1μF)	[C165]
57	VCKYCY1AF105Z	AC		C	Capacitor(10WV 1μF)	[C166]
58	VCKYCY1HF104Z	AA		C	Capacitor(50WV 0.1μF)	[C168]
59	VCKYCY1HB102K	AA		C	Capacitor(50WV 1000PF)	[C169]
60	VCKYCY1AF105Z	AC		C	Capacitor(10WV 1μF)	[C170]
61	VCCCCY1HH101J	AA		C	Capacitor(50WV 100PF)	[C171]
62	VCCCCY1HH101J	AA		C	Capacitor(50WV 100PF)	[C176]
63	VCCCCY1HH101J	AA		C	Capacitor(50WV 100PF)	[C177]
64	VCKYCY1AB105K	AB		C	Capacitor(10WV 1.0μF)	[C179]
65	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[C181]
66	VCKYCY1AB105K	AB		C	Capacitor(10WV 1.0μF)	[C182]
67	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[C186]
68	VCKYCY1CB104K	AB		C	Capacitor(16WV 0.1μF)	[C187]
69	VCKYCY1CB104K	AB		C	Capacitor(16WV 0.1μF)	[C188]
70	VCKYCY1AF105Z	AC		C	Capacitor(10WV 1μF)	[C189]
71	VCKYCY1HF104Z	AA		C	Capacitor(50WV 0.1μF)	[C192]
72	VCKYCY1HF104Z	AA		C	Capacitor(50WV 0.1μF)	[C193]
73	VCCCCY1HH101J	AA		C	Capacitor(50WV 100PF)	[C194]
74	VCCCCY1HH101J	AA		C	Capacitor(50WV 100PF)	[C195]
75	VCCCCY1HH101J	AA		C	Capacitor(50WV 100PF)	[C196]
76	VCCCCY1HH101J	AA		C	Capacitor(50WV 100PF)	[C197]
77	VCCCCY1HH101J	AA		C	Capacitor(50WV 100PF)	[C198]
78	VCKYCY1HB102K	AA		C	Capacitor(50WV 1000PF)	[C199]
79	VCKYCY1HB102K	AA		C	Capacitor(50WV 1000PF)	[C200]
80	VCKYCY1HB102K	AA		C	Capacitor(50WV 1000PF)	[C207]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[6] Control PWB unit					
81	VCKYCY1AB105K	AB		C	Capacitor(10WV 1.0μF) [C208]
82	VCKYCY1HB471K	AB		C	Capacitor(50WV 470PF) [C211]
83	VCKYCY1HF104Z	AA		C	Capacitor(50WV 0.1μF) [C212]
84	VCKYCY1HF104Z	AA		C	Capacitor(50WV 0.1μF) [C218]
85	QCNCM2666XH0G	AE	N	C	Connector(7pin) [CNCIS]
86	QCNCM7014SC0B	AD		C	Connector(2pin) [CNCSW]
87	QCNCM2508SC1D	AF		C	Connector(14pin) [CNLIUA]
88	QCNCM7014SC0F	AB		C	Connector(6pin) [CNMT]
89	QCNCM2666XH1F	AF	N	C	Connector(16pin) [CNPN]
90	QCNCM7014SC0C	AA		C	Connector(3pin) [CNPRG]
91	QCNCM2638SC0F	AE		C	Connector(6pin) [CNPW]
92	QCNCM2666XH0C	AD	N	C	Connector(3pin) [CNSP]
93	QCNCM7014SC1E	AC		C	Connector(15pin) [CNTH]
94	VHDHRW0202B-1	AD		B	Diode(HRW0202B) [D100]
95	VHD1SS355//-1	AB		B	Diode(1SS355) [D101]
96	VHD1SS355//-1	AB		B	Diode(1SS355) [D102]
97	VHD1SS355//-1	AB		B	Diode(1SS355) [D103]
⚠ 98	QFS-L1037YCZZ	AD		A	IC protector(KAB3202) [FU100]
99	VHIF002/TB40C	BA	N	B	IC,FLASH ROM(2MB)(Ver.:TB40C)(DROM-481SXH0A) [IC1]
100	RH-IX2168SCZZ	BB		B	IC(MSM51V4800E) [IC2][OKI'S DRAM]
	RH-IX2321XHZZ	AX	N	B	IC(IS41LV85125) [IC2][ISSI'S DRAM]
101	VHISCE214V/-1	AF		B	IC(SCE214V) [IC3]
102	RH-IX2270XHZZ	AL		B	IC(SN74LV4051ANSR) [IC5]
103	RH-IX2356XHZZ	AL	N	B	IC(ULN2001A) [IC6]
104	VHINJM2113M-1	AG		B	IC(NJM2113M) [IC7]
105	RH-IX2263XHZZ	BF	N	B	IC(SST39VF040P) [IC13]
106	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%) [L100]
107	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%) [L102]
108	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%) [L103]
109	VRS-CY1JB150J	AA		C	Resistor(1/16W 15Ω ±5%) [L104]
110	VS2SA1530AS-1	AC		B	Transistor(2SA1530AS) [Q100]
111	VSRT1N141C/-1	AB		B	Transistor(RT1N141C) [Q102]
112	VSRT1N141C/-1	AB		B	Transistor(RT1N141C) [Q103]
113	VSRT1N141C/-1	AB		B	Transistor(RT1N141C) [Q104]
114	VSRT1N141C/-1	AB		B	Transistor(RT1N141C) [Q105]
115	VSSI4431ADY-1	AF		B	FET(SI4431ADY) [Q108]
116	VSRT1N141C/-1	AB		B	Transistor(RT1N141C) [Q110]
117	VSRT1P141C+-1	AB		B	Transistor(RT1P141C) [Q111]
118	VSRT1N141C/-1	AB		B	Transistor(RT1N141C) [Q113]
119	VRS-CY1JB562J	AA		C	Resistor(1/16W 5.6KΩ ±5%) [R100]
120	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%) [R101]
121	VRS-CY1JB271J	AA		C	Resistor(1/16W 270Ω ±5%) [R102]
122	VRS-CY1JB271J	AA		C	Resistor(1/16W 270Ω ±5%) [R103]
123	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%) [R104]
124	VRS-CY1JB471J	AA		C	Resistor(1/16W 470Ω ±5%) [R105]
125	VRS-CY1JB471J	AA		C	Resistor(1/16W 470Ω ±5%) [R106]
126	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%) [R107]
127	VRS-CY1JB471J	AA		C	Resistor(1/16W 470Ω ±5%) [R108]
128	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%) [R112]
129	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%) [R113]
130	VRS-CY1JB271J	AA		C	Resistor(1/16W 270Ω ±5%) [R116]
131	VRS-CY1JB151J	AA		C	Resistor(1/16W 150Ω ±5%) [R117]
132	VRS-CY1JB102J	AA		C	Resistor(1/16W 1KΩ ±5%) [R118]
133	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%) [R119]
134	VRS-CY1JB512J	AA		C	Resistor(1/16W 5.1KΩ ±5%) [R120]
135	VRS-CY1JB154J	AA		C	Resistor(1/16W 150KΩ ±5%) [R121]
136	VRS-CY1JB104J	AA		C	Resistor(1/16W 100KΩ ±5%) [R122]
137	VRS-CY1JB224J	AA		C	Resistor(1/16W 220KΩ ±5%) [R124]
138	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%) [R125]
139	VRS-CY1JB513J	AA		C	Resistor(1/16W 51KΩ ±5%) [R127]
140	VRS-CY1JB224J	AA		C	Resistor(1/16W 220KΩ ±5%) [R128]
141	VRS-CY1JB102J	AA		C	Resistor(1/16W 1KΩ ±5%) [R129]
142	VRS-CY1JB102J	AA		C	Resistor(1/16W 1KΩ ±5%) [R130]
143	VRS-CY1JB153J	AA		C	Resistor(1/16W 15KΩ ±5%) [R131]
144	VRS-CY1JB102J	AA		C	Resistor(1/16W 1KΩ ±5%) [R132]
145	VRS-CY1JB105J	AA		C	Resistor(1/16W 1.0MΩ ±5%) [R133]
146	VRS-CY1JB301J	AA		C	Resistor(1/16W 300Ω ±5%) [R134]
147	VRS-CY1JB102J	AA		C	Resistor(1/16W 1KΩ ±5%) [R135]
148	VRS-CY1JB302J	AA		C	Resistor(1/16W 3KΩ ±5%) [R136]
149	VRS-CY1JB203J	AA		C	Resistor(1/16W 20KΩ ±5%) [R137]
150	VRS-CY1JB224J	AA		C	Resistor(1/16W 220KΩ ±5%) [R139]
151	VRS-CY1JB474J	AA		C	Resistor(1/16W 470KΩ ±5%) [R140]
152	VRS-CY1JB155J	AB		C	Resistor(1/16W 1.5MΩ ±5%) [R141]
153	VRS-CY1JB204J	AA		C	Resistor(1/16W 200KΩ ±5%) [R142]
154	VRS-CY1JB393J	AA		C	Resistor(1/16W 39KΩ ±5%) [R143]
155	VRS-CY1JB243J	AA		C	Resistor(1/16W 24KΩ ±5%) [R144]
156	VRS-CY1JB622J	AA		C	Resistor(1/16W 6.2KΩ ±5%) [R145]
157	VRS-CY1JB913J	AA		C	Resistor(1/16W 91KΩ ±5%) [R146]
158	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%) [R149]
159	VRS-CY1JB474J	AA		C	Resistor(1/16W 470KΩ ±5%) [R150]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
[6] Control PWB unit						
160	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R151]
161	VRS-CY1JB203J	AA		C	Resistor(1/16W 20KΩ ±5%)	[R152]
162	VRS-CY1JB102J	AA		C	Resistor(1/16W 1KΩ ±5%)	[R153]
163	VRS-CY1JB222J	AA		C	Resistor(1/16W 2.2KΩ ±5%)	[R154]
164	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R155]
165	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R156]
166	VRS-CY1JB106J	AA		C	Resistor(1/16W 10MΩ ±5%)	[R157]
167	VCKYCY1HF104Z	AA		C	Capacitor(50WV 0.1µF)	[R163]
168	VRS-CY1JB105J	AA		C	Resistor(1/16W 1.0MΩ ±5%)	[R164]
169	VRS-CY1JB682J	AA		C	Resistor(1/16W 6.8KΩ ±5%)	[R165]
170	VRS-CY1JB203J	AA		C	Resistor(1/16W 20KΩ ±5%)	[R166]
171	VRS-CY1JB472J	AA		C	Resistor(1/16W 4.7KΩ ±5%)	[R167]
172	VRS-CY1JB271J	AA		C	Resistor(1/16W 270Ω ±5%)	[R168]
173	VRS-CY1JB124J	AA		C	Resistor(1/16W 120KΩ ±5%)	[R171]
174	VRS-CY1JB223J	AA		C	Resistor(1/16W 22KΩ ±5%)	[R172]
175	VRS-CY1JB271J	AA		C	Resistor(1/16W 270Ω ±5%)	[R173]
176	VRS-CY1JB102J	AA		C	Resistor(1/16W 1KΩ ±5%)	[R174]
177	VRS-CY1JB271J	AA		C	Resistor(1/16W 270Ω ±5%)	[R175]
178	VRS-CY1JB471J	AA		C	Resistor(1/16W 470Ω ±5%)	[R178]
179	VRS-CY1JB271J	AA		C	Resistor(1/16W 270Ω ±5%)	[R179]
180	VRS-CY1JB393J	AA		C	Resistor(1/16W 39KΩ ±5%)	[R180]
181	VRS-CY1JB271J	AA		C	Resistor(1/16W 270Ω ±5%)	[R183]
182	VRS-CY1JB271J	AA		C	Resistor(1/16W 270Ω ±5%)	[R186]
183	VRS-CY1JB101J	AA		C	Resistor(1/16W 100Ω ±5%)	[R187]
184	VRS-CY1JB271J	AA		C	Resistor(1/16W 270Ω ±5%)	[R189]
185	VRS-CY1JB151J	AA		C	Resistor(1/16W 150Ω ±5%)	[R190]
186	VRS-CY1JB151J	AA		C	Resistor(1/16W 150Ω ±5%)	[R191]
187	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R192]
188	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R195]
189	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R204]
190	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R205]
191	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R206]
192	VRS-CY1JB104J	AA		C	Resistor(1/16W 100KΩ ±5%)	[R207]
193	RR-TZ3018SCZZ	AC		C	Block resistor(470Ωx4)	[RA1]
194	RR-TZ3018SCZZ	AC		C	Block resistor(470Ωx4)	[RA2]
195	RR-TZ3018SCZZ	AC		C	Block resistor(470Ωx4)	[RA3]
196	RR-TZ3017SCZZ	AC		C	Block resistor(270Ωx4)	[RA4]
197	RH-IX2357XHZZ	AH		B	IC(S-814A33AUA)	[REG1]
198	RCRSP2176SCZZ	AG		B	Crystal(32.256MHz)	[X1]
199	RCRSB0297AFZZ	AD		B	Crystal(32.768kHz)	[X2]
200	VHE1N4748A/-1	AC		B	Diode(1N4748A)	[ZD1]
201	VHE02CZ180Y-1	AC		B	Zener diode(02CZ180Y)	[ZD100]
	(Unit)					
901	DCEKC481SXHZZ	BY	N	E	Control PWB unit(Within ROM)	
[7] TEL/LIU PWB unit						
1	VHVRA391PV6-1	AE		B	Varistor(RA-391P-V6-2)	[AR1]
2	VHVRA501PC6-1	AG		B	Varistor(RA501P-C6)	[AR2]
3	VHVRA501PC6-1	AG		B	Varistor(RA501P-C6)	[AR3]
4	VCEAGA1HW226M	AB		C	Capacitor(50WV 22µF)	[C1]
5	VCEAGA1HW107M	AA		C	Capacitor(50WV 100µF)	[C2]
6	VCEAGA1HW226M	AB		C	Capacitor(50WV 22µF)	[C5]
7	VCEAGA1HW226M	AB		C	Capacitor(50WV 22µF)	[C6]
8	VCEAGA1HW106M	AA		C	Capacitor(50WV 10µF)	[C8]
9	RC-FZ3024SCZZ	AG		C	Capacitor(250WV 0.82µF)	[C10]
10	VCEAGA1HW475M	AA		C	Capacitor(50WV 4.7µF)	[C12]
11	VCKYPA1HB103K	AA		C	Capacitor(50WV 0.01µF)	[C14]
12	VCKYCY1HF104Z	AA		C	Capacitor(50WV 0.1µF)	[C101]
13	VCKYCY1HF104Z	AA		C	Capacitor(50WV 0.1µF)	[C103]
14	VCKYCY1HB102K	AA		C	Capacitor(50WV 1000PF)	[C105]
15	VCKYCY1HB102K	AA		C	Capacitor(50WV 1000PF)	[C106]
16	VCKYCY1HB102K	AA		C	Capacitor(50WV 1000PF)	[C108]
17	VCKYCY1HB102K	AA		C	Capacitor(50WV 1000PF)	[C109]
18	VCCCCY1HH330J	AA		C	Capacitor(50WV 33PF)	[C111]
19	VCKYCY1HB821K	AA		C	Capacitor(50WV 820PF)	[C112]
20	VCKYCY1HF104Z	AA		C	Capacitor(50WV 0.1µF)	[C115]
21	VCKYCY1HB102K	AA		C	Capacitor(50WV 1000PF)	[C116]
22	VCCCCY1HH221J	AA		C	Capacitor(50WV 220PF)	[C117]
23	VCKYCY1HB102K	AA		C	Capacitor(50WV 1000PF)	[C118]
24	VCKYCY1HF104Z	AA		C	Capacitor(50WV 0.1µF)	[C119]
25	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[C125]
26	VCKYCY1HB471K	AB		C	Capacitor(50WV 470PF)	[C126]
27	VCCCCY1HH221J	AA		C	Capacitor(50WV 220PF)	[C130]
28	VCKYCY1CB104K	AB		C	Capacitor(16WV 0.1µF)	[C134]
29	VCKYCY1HB222K	AA		C	Capacitor(50WV 2200PF)	[C140]
30	RRLYD3436XHZZ	AP		B	Relay(A5X-24E-908)	[CML]
31	QJAKZ2079XH0D	AD		C	Jack	[CNHJ]
32	QCNCW715PAFZZ	AG		C	Connector(14pin)	[CNLIUA]
33	QJAKZ2060SC0B	AD		C	Jack	[CNLNJ]
34	VHD1N4148//-1	AA		B	Diode(1N4148)	[D1]

	NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
	[7] TEL/LIU PWB unit						
	35	VHD1N4148//-1	AA		B	Diode(1N4148)	[D2]
	36	VHD1N4148//-1	AA		B	Diode(1N4148)	[D3]
	37	VHD1N4148//-1	AA		B	Diode(1N4148)	[D100]
	38	VHD1N4148//-1	AA		B	Diode(1N4148)	[D101]
	39	VHINJM2902M-1	AF		B	IC(NJM2902M)	[IC101]
	40	RFILN2035XHZZ	AF		C	Coil(LSHSR02C-001)	[L4]
	41	RFILN2035XHZZ	AF		C	Coil(LSHSR02C-001)	[L8]
	42	VHPPC814X//-1	AE		B	Photo coupler(PC814X)	[PC3]
	43	VHPPC817X4/-1	AC		B	Photo coupler(PC817X4)	[PC4]
⚠	44	VHPSG206S//-1	AG		B	Photo transistor(SG206S)	[PH1]
⚠	45	VHPSG206S//-1	AG		B	Photo transistor(SG206S)	[PH2]
	46	VSRT1N436C/-1	AD		B	Transistor(RT1N436C)	[Q102]
	47	VSRT1P141C+-1	AB		B	Transistor(RT1P141C)	[Q103]
	48	VSRT1N436C/-1	AD		B	Transistor(RT1N436C)	[Q104]
	49	VS2SC3052F/-1	AD		B	Transistor(2SC3052F)	[Q105]
	50	VSRT1N436C/-1	AD		B	Transistor(RT1N436C)	[Q106]
	51	VRS-RE3AA122J	AC		C	Resistor(1W 1.2KΩ ±5%)	[R1]
	52	VRS-RE2HA101J	AB		C	Resistor(1/2W 100Ω ±5%)	[R2]
	53	VRD-HT2EY910J	AA		C	Resistor(1/4W 91Ω ±5%)	[R7]
	54	VRD-HT2EY300J	AA		C	Resistor(1/4W 30Ω ±5%)	[R8]
	55	VRD-HT2HY223J	AA		C	Resistor(1/2W 22KΩ ±5%)	[R12]
	56	VRD-HT2EY151J	AA		C	Resistor(1/4W 150Ω ±5%)	[R14]
	57	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R102]
	58	VRS-CY1JB332J	AA		C	Resistor(1/16W 3.3KΩ ±5%)	[R103]
	59	VRS-CY1JB332J	AA		C	Resistor(1/16W 3.3KΩ ±5%)	[R104]
	60	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R105]
	61	VRS-CY1JB393J	AA		C	Resistor(1/16W 39KΩ ±5%)	[R106]
	62	VRS-CY1JB223J	AA		C	Resistor(1/16W 22KΩ ±5%)	[R107]
	63	VRS-CY1JB153J	AA		C	Resistor(1/16W 15KΩ ±5%)	[R108]
	64	VRS-CY1JB243J	AA		C	Resistor(1/16W 24KΩ ±5%)	[R109]
	65	VRS-CY1JB163J	AA		C	Resistor(1/16W 16KΩ ±5%)	[R110]
	66	VRS-CY1JB101J	AA		C	Resistor(1/16W 100Ω ±5%)	[R111]
	67	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R112]
	68	VRS-CY1JB621J	AA		C	Resistor(1/16W 620Ω ±5%)	[R113]
	69	VRS-CY1JB823J	AD		C	Resistor(1/16W 82KΩ ±5%)	[R117]
	70	VRS-CY1JB102J	AA		C	Resistor(1/16W 1KΩ ±5%)	[R118]
	71	VRS-CY1JB822J	AA		C	Resistor(1/16W 8.2KΩ ±5%)	[R119]
	72	VRS-CY1JB133J	AA		C	Resistor(1/16W 13KΩ ±5%)	[R120]
	73	VRS-CY1JB822J	AA		C	Resistor(1/16W 8.2KΩ ±5%)	[R121]
	74	VRS-CY1JB224J	AA		C	Resistor(1/16W 220KΩ ±5%)	[R122]
	75	VRS-CY1JB102J	AA		C	Resistor(1/16W 1KΩ ±5%)	[R123]
	76	VRS-CY1JB152J	AA		C	Resistor(1/16W 1.5KΩ ±5%)	[R125]
	77	VRS-CY1JB332J	AA		C	Resistor(1/16W 3.3KΩ ±5%)	[R126]
	78	VRS-CY1JB822J	AA		C	Resistor(1/16W 8.2KΩ ±5%)	[R130]
	79	VRS-CY1JB102J	AA		C	Resistor(1/16W 1KΩ ±5%)	[R131]
	80	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R132]
	81	VRS-TS2AD223J	AA		C	Resistor(1/10W 22KΩ ±5%)	[R133]
	82	VHINJM78L05A1	AD		B	IC(NJM78L05A)	[REG1]
	83	QSW-Z2317XHZZ	AF		C	Hook switch	[SW1]
⚠	84	RTRNI2164XHZZ	AG		B	Transformer(I2164)	[T1]
	85	VHEHZ9C3///-1	AE		B	Zener diode(HZ9C3)	[ZD1]
	86	VHEHZ27-1//-1	AB		B	Zener diode(HZ27)	[ZD5]
	87	VHEHZ2C1///-1	AA		B	Zener diode(HZ2C1)	[ZD6]
	88	VHEHZ2C1///-1	AA		B	Zener diode(HZ2C1)	[ZD7]
	89	VHEHZ2A1///-1	AC		B	Zener diode(HZ2A1)	[ZD9]
	90	VHEHZ2A1///-1	AC		B	Zener diode(HZ2A1)	[ZD10]
		(Unit)					
	901	DCEKL498CXH01	BF	N	E	TEL/LIU PWB unit	
	[8] Power supply PWB unit						
	1	0CBUGFM224KR/	AF		C	Capacitor(275WV 0.22μF)	[C1]
	2	0CBUGA0291ZZ/	AC		C	Capacitor(200WV 220μF)	[C2]
	3	0CBUGCU471EL/	AF	N	C	Capacitor(1KWV 470PF)	[C3]
	4	0CBUGXJQF102/	AC		C	Capacitor(50WV 1000PF)	[C4]
	5	0CBUGXHWF153/	AF		C	Capacitor(50WV 0.015μF)	[C5]
	6	0CBUEXBAF000/	AC	N	C	Resistor(1/16W 0Ω ±5%)	[C6]
	7	0CBUGA0315ZZ/	AL		C	Capacitor(35WV 560μF)	[C8]
	8	0CBUGA0302ZZ/	AK		C	Capacitor(16WV 330μF)	[C10]
	9	0CBUGXJXD104/	AD	N	C	Capacitor(25WV 0.1μF)	[C12]
	10	0CBUGCS222AJ/	AD	N	C	Capacitor(500WV 2200PF)	[C13]
	11	0CBUGXHPF391/	AD	N	C	Capacitor(50WV 390PF)	[C24]
	12	0CBUGCM103BH/	AD		C	Capacitor(250WV 0.01μF)	[C26]
	13	0CBUGCM103BH/	AD		C	Capacitor(250WV 0.01μF)	[C27]
	14	0CBUGCU472BW/	AD		C	Capacitor(1KWV 4700PF)	[C31]
	15	0CBPKZ0194ZZ/	AC		C	Base post ass'y(B 2P3-VH)	[CNAC]
	16	0CBPCZ0307ZZ/	AD		C	Connector(IMSA-9110S-06)	[CNPS]
	17	0CBUBF0002AK/	AD	N	B	Diode(10EDB60)	[D1]
	18	0CBUBF0002AK/	AD	N	B	Diode(10EDB60)	[D2]
	19	0CBUBF0002AK/	AD	N	B	Diode(10EDB60)	[D3]
	20	0CBUBF0002AK/	AD	N	B	Diode(10EDB60)	[D4]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
[8] Power supply PWB unit						
21	0CBUBA0003BL/	AD	N	B	Diode(1S2076A)	[D5]
22	0CBUBC0336AZ/	AL		B	Diode(S3L20U)	[D7]
23	0CBUBC0070AM/	AG		B	Diode(ERA81-004V3)	[D8]
24	0CBUBC0169CL/	AE		B	Diode(ERA22-06V3)	[D9]
25	0CBPJCEJ3151/	AH	N	A	Fuse(3.15A/AC125V)	[F1]
26	0CBPZZ1008ZZ/	AH		A	Circuit protector(4A/32V)	[F3]
27	0CBBFZ89902Z/	AD	N	C	Beads core(3A)	[FB2]
28	0CBBFZ89633Z/	AD		C	Beads inductor(BP53RB052025050)	[FB3]
29	0CBUKZ1186ZZ/	AH	N	C	Filter(33mH/0.5A)	[L1]
30	0CBUZZ0213ZZ/	AN		C	Inductor(RS912)	[L2]
31	0CBLRZ6987ZA/	AQ	N	C	Heat sink(MN210-5001AT)	[MT2]
32	0CBUDC0062MZ/	AG		B	Photo coupler(PS2501-1L)	[PC1]
33	0CBUAG0213AC/	AQ	N	B	FET(2SK3306)	[Q1]
34	0CBUAC0255AM/	AD		B	Transistor(2SC4115S)	[Q2]
35	0CBUAC0264AK/	AD		B	Transistor(2SC1741AS)	[Q3]
36	0CBUAC0034EL/	AD		B	Transistor(2SC1740S)	[Q4]
37	0CBUEXDAW334/	AC	N	C	Resistor(1/4W 330KΩ ±5%)	[R1]
38	0CBUEXDAW474/	AC		C	Resistor(1/4W 470KΩ ±5%)	[R2]
39	0CBUEXDAW474/	AC		C	Resistor(1/4W 470KΩ ±5%)	[R3]
40	0CBUEEB681CT/	AC		C	Resistor(1/4W 680Ω ±5%)	[R4]
41	0CBUEXCAP272/	AC		C	Resistor(1/10W 2.7KΩ ±5%)	[R5]
42	0CBUEXBAF183/	AC	N	C	Resistor(1/16W 18KΩ ±5%)	[R6]
43	0CBUEXBAF181/	AC	N	C	Resistor(1/16W 18KΩ ±5%)	[R7]
44	0CBUEXBAF473/	AC	N	C	Resistor(1/16W 47KΩ ±5%)	[R8]
45	0CBUEXBAF470/	AC	N	C	Resistor(1/16W 47Ω ±5%)	[R9]
46	0CBUEFDR15DB/	AE		C	Metal film resistor(1W 0.15Ω ±5%)	[R10]
47	0CBUEXDAW334/	AC	N	C	Resistor(1/4W 330KΩ ±5%)	[R11]
48	0CBUEXDAW334/	AC	N	C	Resistor(1/4W 330KΩ ±5%)	[R12]
49	0CBUEEB472CT/	AC		C	Resistor(1/4W 4.7KΩ ±5%)	[R13]
50	0CBUEXCAP102/	AC		C	Resistor(1/16W 1KΩ ±5%)	[R14]
51	0CBUEXBAF334/	AC	N	C	Resistor(1/16W 330KΩ ±5%)	[R15]
52	0CBUEXBAF103/	AC	N	C	Resistor(1/16W 10KΩ ±5%)	[R16]
53	0CBUEXBAF332/	AC	N	C	Resistor(1/16W 3.3KΩ ±5%)	[R17]
54	0CBUEEB332CT/	AC	N	C	Resistor(1/4W 3.3KΩ ±5%)	[R18]
55	0CBUEEB682CT/	AC		C	Resistor(1/4W 6.8KΩ ±5%)	[R27]
56	0CBUEEB682CT/	AC		C	Resistor(1/4W 6.8KΩ ±5%)	[R28]
57	0CBUEEB682CT/	AC		C	Resistor(1/4W 6.8KΩ ±5%)	[R29]
58	0CBUEFE104DS/	AE	N	C	Metal film resistor(2W 100KΩ ±5%)	[R30]
59	0CB829653001/	BF	N	B	Transformer(PTTN146-KTT)	[T1]
60	0CBUEZ0666ZZ/	AD		B	Varistor(S07K150GA)	[V1]
61	0CBUFBA222EQ/	AD		C	Variable resistor(2.2KΩ)	[VR1]
62	0CBUBDQR270A/	AD	N	B	Zener diode(27HSB-26)	[ZD1]
63	0CBUBDBE4R3C/	AD		B	Zener diode(RD4.3SAB)	[ZD2]
64	0CBUBDDA300A/	AE		B	Zener diode(HZ30CPTK)	[ZD4]
65	0CBUBDBE6R2C/	AC		B	Zener diode(RD6.2SAB2-T1)	[ZD5]
66	0CBUBDBE100C/	AE	N	B	Zener diode(RD10ESAB-T1)	[ZD8]
67	0CBUBDBE9R1C/	AD		B	Zener diode(RD9.1ESAB2-T1)	[ZD9]
	(Unit)					
⚠ 901	RDENT2198XHZZ	BG	N	E	Power supply PWB unit	
[9]Operation panel PWB unit						
1	QSW-Q2331XHZZ	AE	N	C	Tact switch	[SW]
⚠ 2	QSW-M2246AXZZ	AH		C	FRSNS sensor	
⚠ 3	QSW-M2294XHZZ	AE		C	ORGSNS sensor	
	(Unit)					
901	DCEKP478CXH02	BG	N	E	Operation panel PWB unit	

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PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
[C]				
CCNWN395BXH01	1-3	AP	N	C
CGERH2314XH05	4-1	AS		C
CGERH2566XH01	5-21	AG		C
CLEVP2358XH01	1-4	AD		C
CLEVP2359XH01	4-2	AD		C
CLEVP2360XH01	4-3	AD		C
CLEVP2361XH01	4-4	AD		C
CLEVP2362XH01	4-5	AD		C
CPAKC222FXH01	5-17	AT	N	D
CPLTP3183XHRF	5-20	AV	N	C
CPLTP3222XHR2	5-3	AQ	N	C
CROLR2481XH01	1-5	AQ		C
[D]				
DCEKC481SXHZZ	1-6	BY	N	E
〃	6-901	BY	N	E
DCEKL498CXH01	1-7	BF	N	E
〃	7-901	BF	N	E
DCEKP478CXH02	3-5	BG	N	E
〃	9-901	BG	N	E
DCEKP480CXH03	3-901	BG	N	E
DUNTK497CXHFW	5-1	AY	N	E
[G]				
GCABB2393XHSH	1-35	AZ		D
GCASP2173XHSB	3-1	BA	N	D
GCOVA2447XHVA	1-46	AL	N	D
GCOVA2448XHVA	2-1	AX	N	C
GLEGG2078XHZZ	1-47	AD		C
[H]				
HPNLH2420XHSM	1-62	AL	N	D
〃	3-21	AL	N	D
[J]				
JBTN-2357XHSB	3-2	AK	N	C
JBTN-2358XHSB	3-4	AH	N	C
JBTN-2359XHSF	3-3	AQ	N	C
JBTN-2360XHSC	3-18	AH	N	C
JBTN-2361XHSD	3-19	AM	N	C
[L]				
LBNDJ2006XHZZ	1-17	AA		C
〃	2-29	AA		C
LBSHP2140XHZA	1-22	AC		C
LBSHP2143XHZZ	1-23	AC		C
LBSHP2148XHZA	2-25	AE	N	C
LBSHP2149XHZA	2-26	AE	N	C
LFRM-2225XHVA	1-24	AP	N	C
LFRM-2226XHZZ	4-6	AQ		C
LFRM-2227XHZZ	2-6	AQ		C
LFRM-2232XHZZ	2-7	AT		C
LHLDZ2224XHZZ	2-18	AL		C
LHLDZ2227XHZZ	1-36	AD		C
LHLDZ2228XHZZ	1-37	AD		C
LPLTG2911XHZZ	3-11	AE		C
LPLTG3181XHZZ	2-19	AD		C
LPLTM3178XHZZ	1-48	AF		C
LPLTM3190XHZZ	4-7	AG		C
LPLTP3175XHZZ	3-12	AD		C
LPLTP3176XHZZ	3-13	AD		C
LPLTP3177XHZZ	1-49	AD		C
LPLTP3179XHZZ	2-20	AD		C
LPLTP3180XHZZ	2-21	AH		C
LPLTP3182XHZZ	2-22	AH		C
LX-BZ2205XHZZ	1-B5	AC		C
LX-BZ2222XHZZ	2-B3	AC		C
LX-BZ2234XHZZ	2-B1	AD		C
LX-BZ2282XHZZ	1-B3	AB		C
LX-WZ2290XHZZ	1-W2	AE		C
[M]				
MCAMP2028XHZZ	4-8	AE		C
MLEVP2356XHZA	1-51	AD	N	C
MLEVP2357XHZZ	1-50	AD		C
MLEVP2363XHZZ	2-8	AD		C
MSPRC3287XHZZ	1-38	AB		C
MSPRC3288XHZZ	1-39	AB		C
MSPRC3295XHZZ	1-25	AB		C
MSPRC3299XHZZ	2-23	AB		C
MSPRC3300XHZZ	2-24	AB		C
MSPRC3301XHZZ	2-2	AB		C
MSPRC3305XHZZ	2-9	AB		C
MSPRC3335XHZZ	2-30	AD		C
MSPRC3340XHZA	1-40	AD		C
MSPRC3346XHZZ	1-66	AD		C
MSPRC3357XHZZ	1-67	AD		C
MSPRD3285XHZZ	1-53	AB		C
MSPRD3286XHZA	1-52	AB		C
MSPRD3291XHZZ	1-54	AD		C
MSPRD3292XHZA	1-55	AB		C
MSPRD3293XHZZ	3-14	AB		C
MSPRD3298XHZZ	4-9	AE		C
MSPRD3302XHZZ	2-10	AB		C
MSPRD3341XHZZ	1-65	AD		C
MSPRD3379XHZZ	1-26	AD		C
MSPRP3297XHZZ	4-23	AD		C
MSPRT3294XHZZ	3-15	AB		C
[N]				
NGERH2380XHZZ	4-10	AC		C
NGERH2409XHZZ	4-11	AB		C
NGERH2568XHZZ	5-4	AB		C
NGERH2569XHZZ	1-27	AC		C
NGERH2570XHZZ	1-28	AD		C
NGERH2571XHZZ	4-12	AD		C
NGERH2572XHZZ	4-13	AD		C
NGERH2573XHZZ	4-14	AD		C
NGERH2574XHZZ	4-15	AD		C
NGERH2575XHZZ	4-16	AD		C
NGERH2576XHZZ	4-17	AD		C
NGERH2577XHZZ	4-18	AD		C
NGERH2579XHZZ	2-27	AD		C
NGERH2580XHZZ	2-11	AC		C
NGERH2581XHZZ	2-12	AC		C
NGERH2582XHZZ	4-19	AC		C
NGERP2318XHZZ	2-3	AD		C
NROLP2332XHZZ	1-29	AD		C
NROLR2482XHZZ	1-30	AR		C
NROLR2483XHZZ	2-13	AL		C
NROLR2485XHZZ	2-28	AQ		C
NROLR2504XHZZ	2-14	AL	N	C
NSFTP2357XHZZ	2-15	AG		C
NSFTP2374XHZZ	2-16	AG	N	C
[P]				
PBRS-2055XHZZ	1-63	AN		C
PCOVP2130XHZZ	1-41	AE		C
PCOVP2131XHVA	1-57	AG	N	C
PCOVP2132XHZZ	1-58	AD		C
PGIDM2614XHSA	3-16	AL		C
PGIDM2615XHZZ	1-42	AD		C
PGIDM2616XHZZ	1-43	AD		C
PGIDM2617XHZZ	1-31	AD		C
PGIDM2618XHZZ	1-32	AD		C
PGIDM2619XHVA	2-4	AG		C
PGIDM2620XHVA	2-5	AG		C
PGIDM2621XHSA	2-17	AF		C
PRBNN2038SC10	5-5	AV	N	S
PSHEP3660XHZZ	3-17	AE		C
PSHEZ3687XHZZ	1-64	AD		C
[Q]				
QACCD2072XHZZ	1-59	AP	N	B
QCNCM2508SC1D	6-87	AF		C
QCNCM2638SC0F	6-91	AE		C
QCNCM2666XH0C	6-92	AD	N	C
QCNCM2666XH0G	6-85	AE	N	C
QCNCM2666XH1F	6-89	AF	N	C
QCNCM7014SC0B	6-86	AD		C
QCNCM7014SC0C	6-90	AA		C
QCNCM7014SC0F	6-88	AB		C
QCNCM7014SC1E	6-93	AC		C
QCNCW715PAFZZ	7-32	AG		C
QCNWG208BXHZZ	5-6	AF		C
QCNWG209BXHOW	5-2	AH		C
QCNWN419BXHZZ	1-33	AL	N	C
QCNWN425BXHZZ	1-16	AR	N	C
〃	3-9	AR	N	C
QCNWN483AXHZZ	4-20	AD		C
QCNWN486AXHZZ	1-44	AM		C
QFS-L1037YCZZ	6-98	AD		A
QJAKZ2060SC0B	7-33	AD		C
QJAKZ2079XH0D	7-31	AD		C
QPWBF3368XHZ2	1-8	AQ	N	E
QSW-F2224SCZZ	4-21	AE		C
QSW-M2246AXZZ	3-7	AH		C
〃	9-2	AH		C
QSW-M2294XHZZ	3-8	AE		C
〃	9-3	AE		C
QSW-Q2331XHZZ	3-6	AE	N	C
〃	9-1	AE	N	C
QSW-Z2317XHZZ	7-83	AF		C
[R]				
RC-FZ3024SCZZ	7-9	AG		C
RCORF2125XHZZ	1-69	AE		B
RCRSB0297AFZZ	6-199	AD		B
RCRSP2176SCZZ	6-198	AG		B
RDENT2198XHZZ	1-61	BG	N	E
〃	8-901	BG	N	E
RFILN2035XHZZ	7-40	AF		C
〃	7-41	AF		C
RH-IX2168SCZZ	6-100	BB		B
RH-IX2263XHZZ	6-105	BF	N	B
RH-IX2270XHZZ	6-102	AL		B
RH-IX2321XHZZ	6-100	AX	N	B
RH-IX2356XHZZ	6-103	AL	N	B
RH-IX2357XHZZ	6-197	AH		B
RHEDZ2065XHZZ	1-45	BP		B
RMOTS2175XHZZ	4-22	AX		B
RR-TZ3017SCZZ	6-196	AC		C
RR-TZ3018SCZZ	6-193	AC		C
〃	6-194	AC		C
〃	6-195	AC		C
RRLYD3436XHZZ	7-30	AP		B
RTRNI2164XHZZ	7-84	AG		B
RUNTZ2124XHZZ	1-34	BM		B
RUNTZ2127XH01	3-10	BC	N	E
[S]				
SPAKA465CXHZZ	5-14	AF		D
SPAKA466CXHZZ	5-15	AF		D
SPAKA467CXHZZ	5-16	AD		D
SPAKP329DXHZZ	5-18	AF		D
[T]				
TCADZ2891XHZZ	5-8	AF	N	D
TCADZ3598XHZZ	5-7	AH	N	D
TCADZ3599XHZZ	5-12	AP	N	D
TINSE4356XHTZ	5-11	AY	N	D
TLABH498FXHZZ	1-68	AH	N	D
[U]				
UBATL2049SCZZ	6-1	AF		B
[V]				
VCCCCY1HH101J	6-14	AA		C
〃	6-15	AA		C
〃	6-16	AA		C
〃	6-17	AA		C
〃	6-18	AA		C
〃	6-19	AA		C
〃	6-21	AA		C
〃	6-61	AA		C
〃	6-62	AA		C
〃	6-63	AA		C
〃	6-73	AA		C
〃	6-74	AA		C
〃	6-75	AA		C
〃	6-76	AA		C
〃	6-77	AA		C
VCCCCY1HH150J	6-32	AB		C
VCCCCY1HH200J	6-44	AA		C
〃	6-47	AA		C
VCCCCY1HH221J	6-35	AA		C
〃	7-22	AA		C
〃	7-27	AA		C
VCCCCY1HH330J	6-33	AA		C
〃	7-18	AA		C
VCEAGA0JW227M	6-2	AD		C
〃	6-8	AD		C
VCEAGA1EW476M	6-3	AA		C
〃	6-9	AA		C
VCEAGA1HW106M	6-4	AA		C
〃	6-5	AA		C
〃	6-6	AA		C
〃	6-7	AA		C
〃	7-8	AA		C
VCEAGA1HW107M	7-5	AA		C
VCEAGA1HW226M	6-10	AB		C
〃	7-4	AB		C
〃	7-6	AB		C

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
VCEAGA1HW226M	7-7	AB		C
VCEAGA1HW475M	7-10	AA		C
VCKYCY1AB105K	6-64	AB		C
〃	6-66	AB		C
〃	6-81	AB		C
VCKYCY1AF105Z	6-28	AC		C
〃	6-38	AC		C
〃	6-40	AC		C
〃	6-41	AC		C
〃	6-42	AC		C
〃	6-43	AC		C
〃	6-45	AC		C
〃	6-46	AC		C
〃	6-48	AC		C
〃	6-51	AC		C
〃	6-52	AC		C
〃	6-57	AC		C
〃	6-60	AC		C
〃	6-70	AC		C
VCKYCY1CB104K	6-55	AB		C
〃	6-68	AB		C
〃	6-69	AB		C
〃	7-28	AB		C
VCKYCY1HB102K	6-12	AA		C
〃	6-13	AA		C
〃	6-59	AA		C
〃	6-78	AA		C
〃	6-79	AA		C
〃	6-80	AA		C
〃	7-14	AA		C
〃	7-15	AA		C
〃	7-16	AA		C
〃	7-17	AA		C
〃	7-21	AA		C
〃	7-23	AA		C
VCKYCY1HB103K	6-27	AA		C
〃	6-34	AA		C
VCKYCY1HB222K	7-29	AA		C
VCKYCY1HB471K	6-82	AB		C
〃	7-26	AB		C
VCKYCY1HB472K	6-49	AA		C
VCKYCY1HB821K	7-19	AA		C
VCKYCY1HF104Z	6-11	AA		C
〃	6-20	AA		C
〃	6-22	AA		C
〃	6-23	AA		C
〃	6-24	AA		C
〃	6-25	AA		C
〃	6-26	AA		C
〃	6-29	AA		C
〃	6-30	AA		C
〃	6-31	AA		C
〃	6-36	AA		C
〃	6-37	AA		C
〃	6-39	AA		C
〃	6-50	AA		C
〃	6-53	AA		C
〃	6-54	AA		C
〃	6-56	AA		C
〃	6-58	AA		C
〃	6-71	AA		C
〃	6-72	AA		C
〃	6-83	AA		C
〃	6-84	AA		C
〃	6-167	AA		C
〃	7-12	AA		C
〃	7-13	AA		C
〃	7-20	AA		C
〃	7-24	AA		C
VCKYPA1HB103K	7-11	AA		C
VHDHRW0202B-1	6-94	AD		B
VHD1N4148//-1	7-34	AA		B
〃	7-35	AA		B
〃	7-36	AA		B
〃	7-37	AA		B
〃	7-38	AA		B
VHD1SS355//-1	6-95	AB		B
〃	6-96	AB		B
〃	6-97	AB		B
VHEHZ2A1///-1	7-89	AC		B

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VHEHZ2A1///-1	7-90	AC		B
VHEHZ2C1///-1	7-87	AA		B
〃	7-88	AA		B
VHEHZ27-1//-1	7-86	AB		B
VHEHZ9C3///-1	7-85	AE		B
VHE02CZ180Y-1	6-201	AC		B
VHE1N4748A/-1	6-200	AC		B
VHIF002/TB40C	6-99	BA	N	B
VHINJM2113M-1	6-104	AG		B
VHINJM2902M-1	7-39	AF		B
VHINJM78L05A1	7-82	AD		B
VHISCE214V/-1	6-101	AF		B
VHPPC814X//-1	7-42	AE		B
VHPPC817X4/-1	7-43	AC		B
VHPSG206S//-1	7-44	AG		B
〃	7-45	AG		B
VHVRA391PV6-1	7-1	AE		B
VHVRA501PC6-1	7-2	AG		B
〃	7-3	AG		B
VRD-HT2EY151J	7-56	AA		C
VRD-HT2EY300J	7-54	AA		C
VRD-HT2EY910J	7-53	AA		C
VRD-HT2HY223J	7-55	AA		C
VRS-CY1JB000J	6-65	AA		C
〃	6-67	AA		C
〃	6-106	AA		C
〃	6-107	AA		C
〃	6-108	AA		C
〃	6-123	AA		C
〃	6-129	AA		C
〃	6-133	AA		C
〃	6-164	AA		C
〃	6-187	AA		C
〃	6-188	AA		C
〃	7-25	AA		C
〃	7-57	AA		C
〃	7-60	AA		C
〃	7-67	AA		C
〃	7-80	AA		C
VRS-CY1JB101J	6-183	AA		C
〃	7-66	AA		C
VRS-CY1JB102J	6-132	AA		C
〃	6-141	AA		C
〃	6-142	AA		C
〃	6-144	AA		C
〃	6-147	AA		C
〃	6-162	AA		C
〃	6-176	AA		C
〃	7-70	AA		C
〃	7-75	AA		C
〃	7-79	AA		C
VRS-CY1JB103J	6-120	AA		C
〃	6-126	AA		C
〃	6-128	AA		C
〃	6-138	AA		C
〃	6-158	AA		C
〃	6-160	AA		C
〃	6-165	AA		C
〃	6-189	AA		C
〃	6-190	AA		C
〃	6-191	AA		C
VRS-CY1JB104J	6-136	AA		C
〃	6-192	AA		C
VRS-CY1JB105J	6-145	AA		C
〃	6-168	AA		C
VRS-CY1JB106J	6-166	AA		C
VRS-CY1JB124J	6-173	AA		C
VRS-CY1JB133J	7-72	AA		C
VRS-CY1JB150J	6-109	AA		C
VRS-CY1JB151J	6-131	AA		C
〃	6-185	AA		C
〃	6-186	AA		C
VRS-CY1JB152J	7-76	AA		C
VRS-CY1JB153J	6-143	AA		C
〃	7-63	AA		C
VRS-CY1JB154J	6-135	AA		C
VRS-CY1JB155J	6-152	AB		C
VRS-CY1JB163J	7-65	AA		C
VRS-CY1JB203J	6-149	AA		C
〃	6-161	AA		C

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
VRS-CY1JB203J	6-170	AA		C
VRS-CY1JB204J	6-153	AA		C
VRS-CY1JB222J	6-163	AA		C
VRS-CY1JB223J	6-174	AA		C
〃	7-62	AA		C
VRS-CY1JB224J	6-137	AA		C
〃	6-140	AA		C
〃	6-150	AA		C
〃	7-74	AA		C
VRS-CY1JB243J	6-155	AA		C
〃	7-64	AA		C
VRS-CY1JB271J	6-121	AA		C
〃	6-122	AA		C
〃	6-130	AA		C
〃	6-172	AA		C
〃	6-175	AA		C
〃	6-177	AA		C
〃	6-179	AA		C
〃	6-181	AA		C
〃	6-182	AA		C
〃	6-184	AA		C
VRS-CY1JB301J	6-146	AA		C
VRS-CY1JB302J	6-148	AA		C
VRS-CY1JB332J	7-58	AA		C
〃	7-59	AA		C
〃	7-77	AA		C
VRS-CY1JB393J	6-154	AA		C
〃	6-180	AA		C
〃	7-61	AA		C
VRS-CY1JB471J	6-124	AA		C
〃	6-125	AA		C
〃	6-127	AA		C
〃	6-178	AA		C
VRS-CY1JB472J	6-171	AA		C
VRS-CY1JB474J	6-151	AA		C
〃	6-159	AA		C
VRS-CY1JB512J	6-134	AA		C
VRS-CY1JB513J	6-139	AA		C
VRS-CY1JB562J	6-119	AA		C
VRS-CY1JB621J	7-68	AA		C
VRS-CY1JB622J	6-156	AA		C
VRS-CY1JB682J	6-169	AA		C
VRS-CY1JB822J	7-71	AA		C
〃	7-73	AA		C
〃	7-78	AA		C
VRS-CY1JB823J	7-69	AD		C
VRS-CY1JB913J	6-157	AA		C
VRS-RE2HA101J	7-52	AB		C
VRS-RE3AA122J	7-51	AC		C
VRS-TS2AD223J	7-81	AA		C
VSRT1N141C/-1	6-111	AB		B
〃	6-112	AB		B
〃	6-113	AB		B
〃	6-114	AB		B
〃	6-116	AB		B
〃	6-118	AB		B
VSRT1N436C/-1	7-46	AD		B
〃	7-48	AD		B
〃	7-50	AD		B
VSRT1P141C+-1	6-117	AB		B
〃	7-47	AB		B
VSSI4431ADY-1	6-115	AF		B
VS2SA1530AS-1	6-110	AC		B
VS2SC3052F/-1	7-49	AD		B
[X]				
XEBSD20P06000	3-B1	AA		C
XEBSD30P08000	4-B1	AA		C
XEBSD30P10000	1-B1	AA		C
〃	2-B2	AA		C
XEBSD30P12000	1-B2	AA		C
XEPSD30P08000	1-B4	AA		C
XWHSN40-08100	1-W1	AA		C
[0]				
0CBBFZ89633Z/	8-28	AD		C
0CBBFZ89902Z/	8-27	AD	N	C
0CBLRZ6987ZA/	8-31	AQ	N	C
0CBPCZ0307ZZ/	8-16	AD		C
0CBPJCEJ3151/	8-25	AH	N	A
0CBPKZ0194ZZ/	8-15	AC		C
0CBPZZ1008ZZ/	8-26	AH		A

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
0CBUAC0034EL/	8-36	AD		B
0CBUAC0255AM/	8-34	AD		B
0CBUAC0264AK/	8-35	AD		B
0CBUAG0213AC/	8-33	AQ	N	B
0CBUBA0003BL/	8-21	AD	N	B
0CBUBC0070AM/	8-23	AG		B
0CBUBC0169CL/	8-24	AE		B
0CBUBC0336AZ/	8-22	AL		B
0CBUBDBE100C/	8-66	AE	N	B
0CBUBDBE4R3C/	8-63	AD		B
0CBUBDBE6R2C/	8-65	AC		B
0CBUBDBE9R1C/	8-67	AD		B
0CBUBDDA300A/	8-64	AE		B
0CBUBDQR270A/	8-62	AD	N	B
0CBUBF0002AK/	8-17	AD	N	B
〃	8-18	AD	N	B
〃	8-19	AD	N	B
〃	8-20	AD	N	B
0CBUDC0062MZ/	8-32	AG		B
0CBUEEB332CT/	8-54	AC	N	C
0CBUEEB472CT/	8-49	AC		C
0CBUEEB681CT/	8-40	AC		C
0CBUEEB682CT/	8-55	AC		C
〃	8-56	AC		C
〃	8-57	AC		C
0CBUEFDR15DB/	8-46	AE		C
0CBUEFE104DS/	8-58	AE	N	C
0CBUEXBAF000/	8-6	AC	N	C
0CBUEXBAF103/	8-52	AC	N	C
0CBUEXBAF181/	8-43	AC	N	C
0CBUEXBAF183/	8-42	AC	N	C
0CBUEXBAF332/	8-53	AC	N	C
0CBUEXBAF334/	8-51	AC	N	C
0CBUEXBAF470/	8-45	AC	N	C
0CBUEXBAF473/	8-44	AC	N	C
0CBUEXCAP102/	8-50	AC		C
0CBUEXCAP272/	8-41	AC		C
0CBUEXDAW334/	8-37	AC	N	C
〃	8-47	AC	N	C
〃	8-48	AC	N	C
0CBUEXDAW474/	8-38	AC		C
〃	8-39	AC		C
0CBUEZ0666ZZ/	8-60	AD		B
0CBUFBA222EQ/	8-61	AD		C
0CBUGA0291ZZ/	8-2	AC		C
0CBUGA0302ZZ/	8-8	AK		C
0CBUGA0315ZZ/	8-7	AL		C
0CBUGCM103BH/	8-12	AD		C
〃	8-13	AD		C
0CBUGCS222AJ/	8-10	AD	N	C
0CBUGCU471EL/	8-3	AF	N	C
0CBUGCU472BW/	8-14	AD		C
0CBUGFM224KR/	8-1	AF		C
0CBUGXHPF391/	8-11	AD	N	C
0CBUGXHWF153/	8-5	AF		C
0CBUGXJQF102/	8-4	AC		C
0CBUGXJXD104/	8-9	AD	N	C
0CBUKZ1186ZZ/	8-29	AH	N	C
0CBUZZ0213ZZ/	8-30	AN		C
0CB829653001/	8-59	BF	N	B

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK

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